

2016-2362

In the
United States Court of Appeals
for the
Federal Circuit

INTERDIGITAL COMMUNICATIONS, INC., a Delaware corporation,
INTERDIGITAL TECHNOLOGY CORPORATION, a Delaware corporation,
IPR LICENSING, INC., a Delaware corporation,
INTERDIGITAL HOLDINGS, INC., a Delaware corporation,
Plaintiffs-Appellees

v.

ZTE CORPORATION, a Chinese corporation,
ZTE (USA) INC., a New Jersey corporation,
Defendants-Appellants.

*Appeal from the United States District Court for the District of Delaware,
Case No. 13-cv-009-RGA (Hon. Richard G. Andrews)*

CORRECTED BRIEF OF APPELLANTS
ZTE CORPORATION AND ZTE (USA) INC.

Charles M. McMahon
Brian A. Jones
McDERMOTT WILL & EMERY LLP
227 West Monroe Street
Chicago, IL 60606
(312) 372-2000

Jay H. Reiziss
Natalie A. Bennett
McDERMOTT WILL & EMERY LLP
500 North Capitol Street, NW
Washington, DC 20001
(202) 756-8000

Counsel for Appellants
ZTE Corporation and ZTE (USA) Inc.

CERTIFICATE OF INTEREST

Pursuant to Federal Circuit Rule 47.4, counsel for Appellee ZTE

Corporation and ZTE (USA) Inc. certifies as follows:

1. The name of the parties I represent are:
ZTE Corporation and ZTE (USA) Inc.
2. The real parties in interest are:
ZTE Corporation and ZTE (USA) Inc.
3. The parent corporation or publicly held corporation that owns 10% or more of the stock of the parties in interest is:
Shenzhen Zhongxingzin Telecommunications Equipment Company Limited.
4. The following law firms, partners, and associates have appeared for ZTE Corporation and ZTE (USA) Inc. below or are expected to appear for ZTE Corporation and ZTE (USA) Inc. in this Court:
McDermott Will & Emery: Charles M. McMahon, Jay H. Reiziss, Brian A. Jones, Natalie A. Bennett, Hersh H. Mehta; Richards, Layton & Finger: Kelly E. Farnan, Travis Hunter; Brinks Gilson & Lione: Ralph Gabric, Mircea Tipescu, Jeffrey J. Catalano; Formerly of Brinks Gilson & Lione: Kelly Eberspecher, Luke A. Parsons.

Dated: November 17, 2016

/s/ Charles M. McMahon

Charles M. McMahon
MCDERMOTT WILL & EMERY LLP

Counsel for Appellants
ZTE Corporation and ZTE (USA) Inc.

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STATEMENT OF RELATED CASES

There are no other appeals in or from the district court case giving rise to this appeal that were previously before this or any other appellate court. However, in related proceedings, this Court previously heard an appeal on these same patents in *InterDigital Commc'ns, LLC v. U.S. Int'l Trade Comm'n*, Case No. 2010-1093. Also, this Court previously heard an appeal on related patents sharing a common specification and substantively identical disputed claim limitations in *InterDigital Commc'ns, LLC v. U.S. Int'l Trade Comm'n*, Case No. 2014-1176.

In addition to the District Court case giving rise to this appeal, another case remains pending and stayed in the District of Delaware and involves the same two related patents that this Court reviewed in Appeal No. 2014-1176. *See InterDigital Commc'ns LLC v. Nokia Corp.*, Case No. 11-cv-00654-RGA.

Finally, in the Delaware action giving rise to the instant appeal, an unrelated patent (U.S. Patent No. 8,380,244) asserted in the District Court was the subject of an inter partes review proceeding (IPR2014-00525) in which the U.S. Patent and Trademark Office issued a Final Written Decision finding all challenged claims to be unpatentable. An appeal from

that proceeding is currently pending before this Court in *IPR Licensing, Inc. v. ZTE Corp.*, Case Nos. 2016-1374 & -1443.

STATEMENT OF JURISDICTION

This Court has jurisdiction over the issues presented for appeal under 28 U.S.C. § 1292(c)(2) and/or § 1295(a)(1) pursuant to the District Court's certification of partial final judgment under Fed. R. Civ. P. 54(b).

STATEMENT OF THE ISSUES

1. Whether the District Court erroneously construed the terms "successively transmits [or transmitted] signals" in U.S. Patent Nos. 7,190,966 and 7,286,847 to mean "successively [transmits / transmitted] sequences of chips or bits," contrary to this Court's interpretation of the same patent specification and substantively identical terms "successively sends [or sent] transmissions" in related U.S. Patent Nos. 7,706,830 and 8,009,636.

2. Whether the District Court erred by denying judgment as a matter of law that ZTE has not infringed claims 1, 3, 6, 8, 9, and 11 of U.S. Patent No. 7,190,966 and claims 3 and 5 of U.S. Patent No. 7,286,847, where the jury verdict of infringement lacked substantial supporting evidence.

STATEMENT OF THE CASE

This is the fourth appeal to this Court regarding the same fundamental claim construction dispute over a family of wireless communication patents asserted by InterDigital. Collectively, this family of patents are referred to as the “Power Ramp-Up Patents.” This is also InterDigital’s second bite at the apple as to infringement, having failed to prove that the same ZTE products at issue here infringe any of the four Power Ramp-Up Patents in two investigations at the International Trade Commission (“ITC”), one of which this Court has already affirmed on appeal. ZTE brings this appeal to reconcile the District Court’s claim construction with this Court’s previous decisions on the Power Ramp-Up Patents and to challenge an infringement verdict that is unsupported by substantial evidence.

Over the last decade, InterDigital has asserted various patents against ZTE, Nokia, and other manufacturers of wireless communication products in proceedings before the ITC and the District of Delaware. Those proceedings have resulted in three prior appeals to this Court involving the Power Ramp-Up Patents, with InterDigital dropping one of the appeals in light of this Court’s preceding decisions.

Two of the four Power Ramp-Up Patents are asserted here: U.S. Patent Nos. 7,190,966 (“966 patent”) and 7,286,847 (“847 patent”). In the proceedings below, InterDigital asserted that ZTE had infringed claims 1, 3, 6, 8, 9, and 11 of the 966 patent, and claims 3 and 5 of the 847 patent. This Court first addressed these same patents in an earlier appeal of ITC Investigation No. 337-TA-613 involving Nokia (the “613 Investigation/ Appeal”). The Court subsequently addressed two other family members, U.S. Patent Nos. 7,706,830 (“830 patent”) and 8,009,636 (“636 patent”), in an appeal from ITC Investigation No. 337-TA-800 involving ZTE and Nokia (the “800 Investigation/ Appeal”).

The present claim construction dispute centers on the phrase “successively transmitted signals” in the 966 and 847 patents. Based on the specification common to all four Power Ramp-Up Patents, this Court previously has interpreted the substantively identical phrase, “successively sent transmissions” in the related 830 and 636 patents to cover signals that are not modulated with data. In accordance with this Court’s claim construction for the related Power Ramp Up Patents, ZTE argued below that the “successively transmitted signals” cover signals that are not modulated with data. InterDigital opposed this construction, and the

District Court erroneously agreed with InterDigital. Based on this Court's two prior decisions and numerous admissions from InterDigital and its expert witnesses, the Court should reverse the District Court's claim construction and adopt an interpretation that the recited signals are not modulated with data.

The Court should also reverse the District Court's denial of judgment as a matter of law on the issue of non-infringement. The jury found infringement of all asserted claims based on conclusory testimony from InterDigital's infringement expert, Dr. Charles Jackson. Dr. Jackson testified that two *different* codes used in ZTE's products are part of a "same code" (966 patent and claim 5 of the 847 patent) or a "portion" and a "remainder" of a code (claim 3 of the 847 patent). Dr. Jackson's conclusory opinion on this issue was contradicted by the documentary evidence and by the other two expert witnesses in this case: Dr. Apostolos Kakaes, who testified for ZTE, and Dr. Zygmunt Haas, who testified for InterDigital on the issue of validity. Critically, to arrive at his conclusion that ZTE infringes, Dr. Jackson had to retrospectively combine two different codes and call them a single code, which his colleague Dr. Haas explained is improper. Because the verdict is supported by nothing more than Dr.

Jackson's conclusory testimony, the Court should reverse on the issue of infringement.

A. The Asserted Patents

The asserted patents apply to a wireless communications method known as "Code Division Multiple Access," or CDMA. CDMA was one of the methods developed in wireless personal telephone communication to overcome the basic problem that radio frequency bandwidth is finite. The problem for the technologists was to find ways in which to share limited bandwidth among as many users as possible.

In the mid-1990's, this CDMA technology was standardized by the Telecommunications Industry Association in a standard referred to as IS-95. IS-95 is the technology used by the Sprint and Verizon "2G" networks. The accused products use "3G" technology called Wideband CDMA, or WCDMA. This technology is included in a 3G standard promulgated by the 3rd Generation Partnership Project ("3GPP").

Common to IS-95 and WCDMA is the need for a mobile device to initiate communications with a mobile network without causing unnecessary interference with other users. This procedure, referred to as "Random Access," presents technical challenges relating to interference

and resource allocation, and both IS-95 and WCDMA had solutions to these challenges.

1. Overview of the Claimed Invention

The Power Ramp-Up Patents are based on a chain of continuation applications that relate back to an application filed on June 27, 1996. By 1996, there were several prior solutions to the Random Access problem. For example, the IS-95 solution used a series of “access probe” signals transmitted at increasing power levels until the base station acknowledged receipt of an access probe, as shown on the following page.

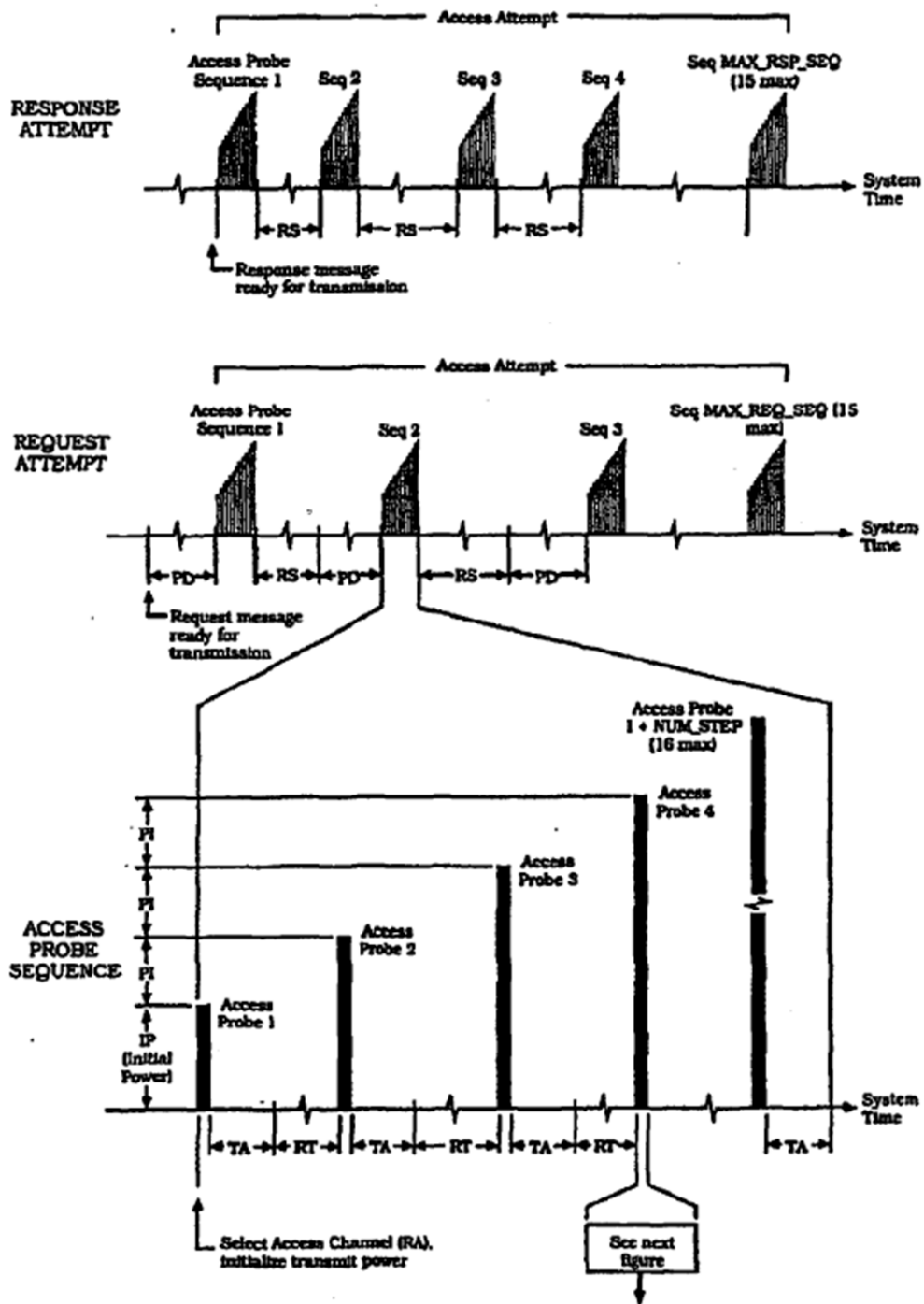


Figure 6.6.3.1.1-1A. Access Channel Request and Response Attempts

Appx9345, Appx8092-8093.

The IS-95 access probes included a preamble and a message capsule containing data the base station needed to evaluate the request. *Id.* In addition to IS-95, numerous other solutions to the Random Access problem were employed and proposed by others. Appx8091. In this crowded field, the Power Ramp-Up Patents proposed a very specific – and very narrow – solution to the Random Access problem that placed a premium on minimizing the amount of unnecessary data transmission.

Two stated objectives of the purported improvement in these patents are: (1) the “reduc[tion of] the time required for the base station to detect the signal from a subscriber unit;” and (2) the reduction of “unnecessary power overshoot.” Appx144 (1:27-34).¹ The specification describes the term “overshoot” as the condition in which a mobile device’s transmission power exceeds the power level required for detection at the base station. Appx147 (7:6-10). Existing techniques could not satisfy these objectives because they were “too complex to permit a base station to quickly acquire

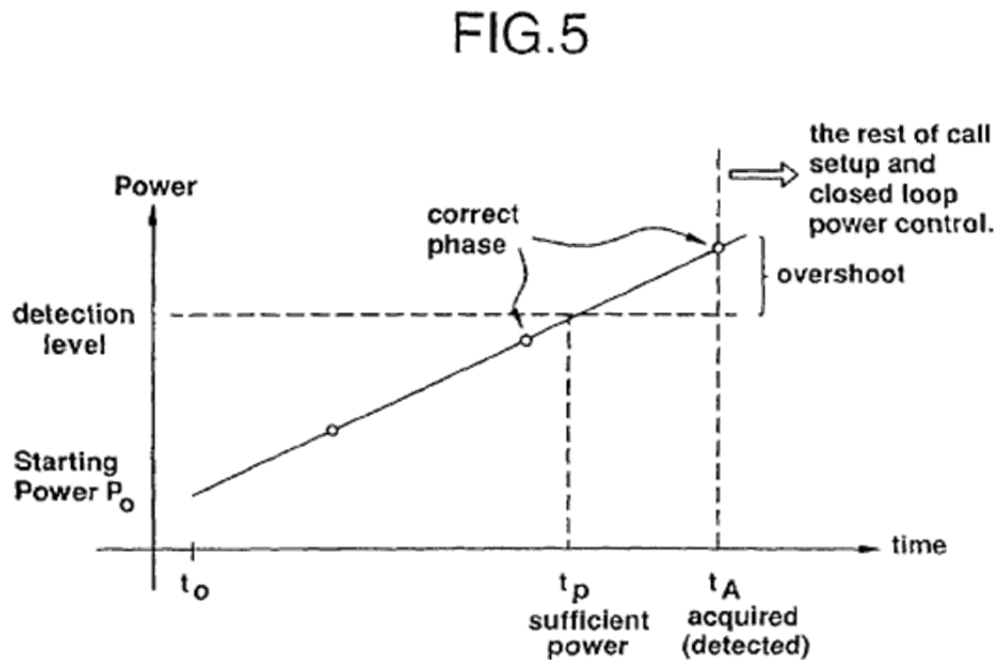
¹ The common specification included in all four Power Ramp-Up Patents is substantively identical. For convenience, references to the common specification herein will be to the 966 patent. The other three patents begin at Appx151 (847 patent), Appx310 (830 patent), and Appx335 (636 patent).

a subscriber unit while limiting the interference to other subscriber units.” Appx144 (2:65-67).

The inventors disclosed only two embodiments of their random access procedure. In both embodiments, the mobile device continuously transmits codes, or portions thereof, at increasing power levels. Appx146-148 (6:57-7:5, 9:7-13). The codes used for this purpose are not modulated by data. Appx147 (7:41-49).

In the first embodiment, the mobile device begins “transmitting at a power level guaranteed to be lower than what is required and increases transmission power output until the correct power level is achieved.” Appx146 (6:1-5). To accomplish this, the mobile device continuously transmits an “access code,” which the patents define as “a known spreading code.” *Id.* (6:16-29). After receiving the proper phase of the “access code” transmitted in the first embodiment, the base station transmits an “access code detection acknowledgement signal.” *Id.* (6:62-67). After receiving this acknowledgement, the mobile device stops transmitting the access code and transmits a “message” to the base station. Appx146-147, 6:67 - 7:2), Appx136 (Fig. 4), Appx137 (Fig. 5).

Figure 5 of the patents depicts the first embodiment:



Appx137.

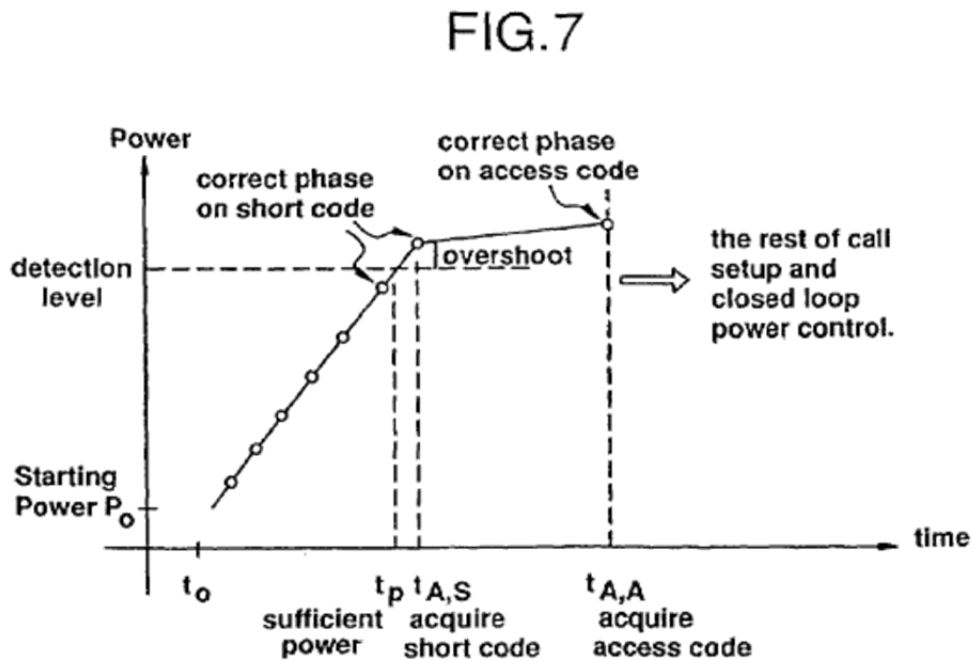
The specification states that the first embodiment “may lead to unnecessary power overshoot from the subscriber unit, thereby reducing the performance of the system.” Appx147 (7:6-10). The failings of the first embodiment were addressed in the second, or “preferred” embodiment of the technology at columns 7-10 of the specification. Appx147-148 (7:41 – 10:53). This embodiment “utilizes ‘short codes’ and a two-stage communication link establishment procedure to achieve fast power ramp-up without large power overshoots.” Appx147 (7:41-44). The “short codes” are “much shorter than the rest of the spreading codes (hence the

term short code).” *Id.* (7:44-48). As InterDigital’s experts testified in related proceedings at the ITC, the “short codes” are not applied to, or modulated with, a data signal. *InterDigital Commc’ns, Inc. v. U.S. Int’l Trade Comm’n (InterDigital I)*, 690 F.3d 1318, 1326 (Fed. Cir. 2012) (noting expert testimony); *InterDigital II*, 601 F. App’x 972, 977 (quoting expert testimony).

The mobile device begins a random access attempt by “transmitting a short code start at a minimum power level P_o , which is guaranteed to be less than the required power” for detection. Appx148 (10:26-31), Appx147 (7:65 – 8:4). The transmission of short codes at increasing power continues until the mobile device receives an acknowledgment from the base station indicating that the base station detected the short code. Appx147 (7:65 – 8:4). After receiving the acknowledgment, the mobile device ceases transmitting the short code and begins transmitting an access code. The mobile device then transmits access codes until the device receives an “access code detection acknowledgment” from the base station. Appx147-148 (8:46 – 9:4, 10:46-53). As in the first embodiment, the base station transmits this acknowledgment upon detecting the proper phase of the access code. *Id.* After receipt of this acknowledgment, the mobile device

ceases transmitting the access code. *Id.* (8:66 – 9:4, 10:49-50). At this point, the random access procedure is complete.

Fig. 7 of the patents, reproduced below, is a graphical representation of the second embodiment:



Appx137.

The asserted 966 and 847 patents are related to two other patents in the Power Ramp-Up Patent family, Nos. 7,706,830 and 8,009,636. All four share a common specification and claim priority to the same original patent application, Serial No. 08/670,162, filed on June 27, 1996. Appx131, Appx152, Appx310, Appx335.

In contrast to the disclosed and claimed Random Access scheme of the Power Ramp-Up Patents, which minimized unnecessary data transmission by sending unmodulated short codes, the accused products employ a different solution to the Random Access problem. Instead of sending unmodulated codes, the accused products transmit modulated codes called “Preambles.”² The Preambles have been modulated with data concerning the nature of the connection requested by the mobile device. This solution is different from that of the Power Ramp-Up Patents because it allows for the transmission of a certain discrete amount of modulated data in the interest of faster acquisition and resource management decisions by the base station.

2. Illustrative Claims

The issues presented in this appeal turn on two limitations that are common to all claims of the asserted patents in one form or another. The first limitation requires that a transmitter “successively transmits signals.” The second limitation requires generation of the “successively transmitted

² These signals are formally known as Physical Random Access Channel (“PRACH”) Preambles but for convenience will be referred to herein simply as “Preambles.”

signals” and a separate message or signal using a “same code.” These limitations are emphasized in claim 1 of the 966 patent on the following page.

1. A wireless code division multiple access (CDMA) subscriber unit comprising:

a transmitter configured such that, when the subscriber unit is first accessing a CDMA network and wants to establish communications with a base station associated with the network over a communication channel to be indicated by the base station, the transmitter *successively transmits signals* until the subscriber unit receives from the base station an indication that a transmitted one of the signals has been detected by the base station, wherein each transmission of one of the signals by the transmitter is at an increased power level with respect to a prior transmission of one of the signals;

the transmitter further configured such that the transmitter transmits to the base station a message indicating to the base station that the subscriber unit wants to establish the communications with the base station over the communication channel to be indicated by the base station, the message being transmitted only subsequent to the subscriber unit receiving the indication,

wherein each of *the successively transmitted signals and the message are generated using a same code*;
and

wherein each of the successively transmitted signals is shorter than the message.

Appx148-149 (10:62 – 11:19) (emphases added).

Claim 3 of the 847 patent recites similar concepts using slightly different language. The message is recited simply as “a signal,” and claim 3 requires the successively transmitted signals to be “generated using a portion of a code” and the signal to be “generated using a remainder of the code.” These limitations are emphasized below.

3. wireless code division multiple access (CDMA) subscriber unit comprising:

a circuit configured to synchronize to a pilot signal transmitted by a base station associated with a CDMA network wherein, if the circuit becomes unsynchronized to the pilot signal during an idle period of the subscriber unit, the circuit is further configured to re-synchronize to the pilot signal;

a transmitter configured such that, when the subscriber unit is first accessing the CDMA network, the transmitter *successively transmits signals generated using a portion of a code* until the subscriber unit receives from the base station an indication that a transmitted one of the signals has been detected by the base station, wherein each transmission of one of the signals by the transmitter, other than a transmission of a first one of the signals, is at an increased power level with respect to a prior transmission of another one of the signals; of

of the signals, is at an increased power level with respect to a prior transmission of another one of the signals;

the transmitter further configured such that,
subsequent to the subscriber unit receiving the
indication, the transmitter *transmits a signal
generated using a remainder of the code*,

wherein, prior to receiving the indication, the
subscriber unit is not uniquely identified to the
base station.

Appx171 (11:53 – 12:9) (emphases added).

B. Related Proceedings Before the ITC and This Court

InterDigital has previously litigated the asserted patents and two other related patents in three separate investigations at the ITC. This Court issued relevant decisions in appeals from two of those investigations.

1. The 613 Investigation and Appeal

In 2007, InterDigital asserted the same two Power Ramp-Up Patents at issue here against Nokia at the ITC in the 613 Investigation. After an evidentiary hearing in 2009, the Administrative Law Judge (“ALJ”) determined that Nokia’s accused products did not infringe these Power Ramp-Up Patents because the term “signals” should be limited to a “spreading code or a portion of a spreading code,” and the accused Nokia devices did not transmit “spreading codes.” The Commission affirmed the ALJ, and InterDigital appealed. *InterDigital I*, 690 F.3d at 1324.

In the appeal before this Court, InterDigital argued that the term “signals” could not be limited to “spreading codes” because spreading codes are used to modulate data, and the short codes of the specification do not modulate data. Specifically, InterDigital made the following representations to this Court in the 613 Appeal:

In describing “the preferred embodiment of the present invention,” the specification identifies “[t]he spreading code transmitted by the subscriber unit” as a “short code” and states that “[t]he short code used for this purpose carries no data.” Similarly, in describing another embodiment “[i]n accordance with the present invention,” the specification characterizes the “pilot code” transmitted by the base station as “a spreading code which carries no data bits.” These “spreading codes” are said to “carry no data” because they are not modulated by data before being transmitted. And *because they are not modulated by data*, these “spreading codes” are not used or intended to be used to increase the bandwidth of another signal. Thus, construing the claimed “codes” and “signals” as limited to “spreading codes” that are used or intended to be used to increase the bandwidth of another signal would improperly exclude *the specification’s only two embodiments*, including the preferred embodiment – an outcome that “is rarely, if ever, correct.”

Appx179 (internal citations omitted) (emphases altered from original).

InterDigital thus expressly represented to this Court that both embodiments – which it described as the “only two embodiments” – use

short codes that “are not modulated by data before being transmitted.” *Id.*

InterDigital continued, arguing that:

The ALJ improperly conflated the conveyance of information, which can be done by an unmodulated spreading code, with the carrying of data, which requires that the spreading code be modulated by a separate data signal. In fact, construing “code” and “signal” to exclude codes that convey information would exclude both disclosed embodiments, because *the codes in those embodiments (including the “short codes”) are unmodulated by data*, yet they convey such information as timing references and channel identification.

Appx181 (internal citations omitted) (emphases altered from original).

This Court relied on InterDigital’s representations that the “short codes” in “the specification’s only two embodiments” are “unmodulated by data” in deciding the case, holding:

As noted, the specification describes various codes, such as pilot codes and short codes, as “spreading codes” even though they carry no data and are not intended to do so. *See* ’966 patent, col. 5, ll. 9-10; col. 7, ll. 44-49. If a code carries no data, *i.e.*, if it is not modulated with a data signal, there is no signal whose bandwidth is increased or is intended to be increased. Experts for both InterDigital and Nokia confirmed that some of the codes described in the specification, such as *the short codes and the access codes, are examples of spreading codes even though they do not spread, or modulate, data.*

InterDigital I, 690 F.3d at 1326 (emphasis added). This Court continued, confirming that it was relying on InterDigital's arguments about the lack of data modulation:

Because the short codes and access codes described in the common specification do not spread data, adoption of the administrative law judge's definition of spreading codes, together with his construction of the term "code" as limited to spreading codes, would mean that neither of the preferred embodiments described in the common specification would fall within the scope of the claims.

Id. (emphasis added). This Court thus reversed and remanded the 613 Appeal.

2. The 800 Investigation and Appeal

In 2011, InterDigital asserted the related 830 and 636 Power Ramp-Up Patents against ZTE, Nokia, and others at the ITC in the 800 Investigation. As noted above, the 830 and 636 patents share a common specification and priority claim with the asserted 966 and 847 Power Ramp-Up Patents. The claims of all four patents also share certain similarities, including the concept of a transmitter that successively transmits signals at increasing power levels. The 830 and 636 patents recite this concept as a transmitter that "successively sends transmissions." *E.g.*, Appx331 (10:60-63); Appx357 (10:52-53).

In the 800 Investigation, InterDigital accused the same ZTE products at issue here, namely wireless devices that communicate with cellular networks using 3G WCDMA technology. Appx9853. During a Random Access procedure, in accordance with the 3GPP standard, these products repeatedly transmit a Preamble at increasing power levels until receiving an acknowledgment from the base station. Appx9854. After receiving the acknowledgment, the accused products transmit a “Message.”³ *Id.* InterDigital alleged that transmission of the Preambles satisfied the “successively [sends / sent] transmissions” requirement of the 830 and 636 Power Ramp-Up Patent claims. Appx9862-9863.

The ALJ conducted an evidentiary hearing in February 2013. Appx9813. On July 1, 2013, the ALJ issued an Initial Determination, which concluded that ZTE and Nokia had not infringed the 830 and 636 patents because the accused products did not “successively send transmissions” as claimed. Appx9799, Appx9862-9863. Based on the same specification that is common to all four Power Ramp-Up Patents, as well as consistent

³ This signal is formally known as the Physical Random Access Channel (“PRACH”) Message Part but for convenience will be referred to herein simply as the “Message.”

testimony from InterDigital's expert, the Commission concluded that the "successively sent transmissions" corresponded to the "short codes" described in the common specification and that "[n]o credible dispute exists that the short codes do not modulate data." Appx10287 (emphasis added). Relying in part on this Court's decision from the 613 Appeal, the Commission adopted the ALJ's construction. Appx10287-10288. The Commission agreed with the ALJ's conclusion that "this construction recognizes that the 'successively sends transmissions' limitation refers to the transmission of short codes, and the parties do not dispute that the short codes do not modulate data and are not intended to do so." Appx10285 (emphasis added).

InterDigital appealed the Commission's final determination, resulting in a decision from this Court on February 28, 2015. *InterDigital Commc'ns, Inc. v. U.S. Int'l Trade Comm'n (InterDigital II)*, 601 F. App'x 972 (Fed. Cir. 2015). The Court affirmed the Commission's claim construction and determination of non-infringement. *Id.* at 979. Specifically, the Court adopted the Commission's two-part interpretation, (1) construing "successively sends transmissions" to mean "transmits to the base station, one after the other, codes that are shorter than a regular length code," and

(2) concluding that these codes correspond to the “short codes” disclosed in the common specification, which “*are neither modulated with data, nor used to modulate data.*” *Id.* at 977 (emphasis added) (citing Appx9835).

The Court rejected InterDigital’s arguments to the contrary, including InterDigital’s argument that this construction improperly limited the claims to a preferred embodiment. *Id.* at 977-79. Acknowledging that “[t]his argument is not without weight,” the Court nevertheless concluded that it “does not carry sufficient weight” because the common specification describes the entire invention with reference to the preferred embodiment. *Id.* at 977-78. Further supporting the Court’s construction is “the fact that the carries-no-data limitation is expressly tied to the purpose of the short codes, which InterDigital does not dispute is universal to the invention.” *Id.* at 978.

3. The 868 Investigation and Appeal

On January 2013, while the 800 Investigation was still pending, InterDigital filed a second ITC complaint against ZTE, resulting in Investigation No. 337-TA-868 (“868 Investigation/ Appeal”). Appx10486-10487. As part of the 868 Investigation, InterDigital asserted the same 966 and 847 patents against the same ZTE products at issue in this appeal.

Compare Appx10487-10489, *with* Appx363-366. The ALJ held an evidentiary hearing in February 2014. Appx10487. On June 13, 2014, the ALJ issued an Initial Determination that ZTE had not infringed the 966 or 847 patents. *Id.*

As part of his determination, the ALJ construed the terms “successively [transmits / transmitted] signals” to have the same meaning the Commission had adopted in the 800 Investigation for the similar terms, “successively [sends / sent] transmissions” (which this Court would later affirm in the 800 Appeal). Appx10339-10350. Comparing representative claims from the 966 and 830 patents, the ALJ concluded that the terms “successively transmitted signals” and “successively sent transmissions” are “essentially interchangeable and substantively identical phrases.” Appx10344. As the ALJ explained, “it is clear that the claim terms cover the same elements, despite their slightly different wording.” Appx10345. The ALJ also relied on admissions by InterDigital and its expert that “there is no difference between ‘successively sends transmissions’ and ‘successively transmits signals’ in the Power Ramp-Up patents” and that they are “*virtually identical limitations.*” Appx10348 (emphasis added).

Thus, based on an analysis of the common specification, as well as this Court’s decision in the 613 Appeal and the Commission’s

determination in the 800 Investigation, the ALJ adopted a construction for the 966 and 847 Power Ramp Up Patents similar to the construction the Commission had adopted for the 830 and 636 Power Ramp Up Patents: “successively [transmits / transmitted] sequences of chips not modulated by a data signal” Appx10350. On August 19, 2014, the Commission issued an Opinion in which it determined not to review this construction or the corresponding non-infringement determination and therefore adopted those conclusions as its own. Appx10491-10492.

InterDigital appealed the Commission’s determination but then moved to stay the 868 Appeal pending the Court’s resolution of the 800 Appeal. Appx10526-10528. In support of its motion to stay, InterDigital stated that the two appeals involved constructions of “two closely related patents with the same specification.” *Id.* In a footnote, InterDigital acknowledged the ALJ’s conclusion, also adopted by the Commission, that the terms “successively transmit[s/ ted] signals” and “successively sen[ds/ t] transmissions” are “substantively identical.” Appx10527, at n.2. The Court granted the stay. Appx10534-10535.

On June 2, 2015, after the Court had affirmed the Commission’s claim construction and determination in the 800 Appeal, InterDigital moved for

voluntary dismissal of the 868 Appeal. Appx10536-10537. The Court granted InterDigital's motion on June 18, 2015. Appx10542.

C. District Court Proceedings

This appeal arises from District of Delaware Case No. 13-009, which paralleled the 868 Investigation at the ITC. InterDigital filed its complaint in Delaware on January 2, 2013, alleging, among other claims, infringement of the 966 and 847 patents. Appx363-366. InterDigital accused the same ZTE products that the Commission has since determined to be non-infringing in the 868 Investigation. Appx363-366 (¶¶ 15-17, 22-24). These were also the same products that the Commission determined do not infringe the related 830 and 636 patents in the 800 Investigation (Appx10285-10288; Appx9853), which determination was affirmed by this Court. *InterDigital II*, 601 F. App'x at 979.

The following sections address the Delaware proceedings relevant to this appeal, which include: (1) claim construction proceedings in which the Court construed "successively [transmits / transmitted] signals" and "code;" (2) a jury trial that resulted in an infringement verdict; (3) ZTE's Rule 50 motion for judgment of non-infringement as a matter of law, which

the District Court denied; and (4) ZTE's motion for Rule 54(b) judgment on the 966 and 847 patents, which the District Court granted.

1. Claim Construction Proceedings

On November 14, 2013, InterDigital and ZTE filed a joint claim construction brief with the District Court. Appx9701-9798. Among other disputed limitations, the parties addressed the terms "successively [transmits / transmitted] signals" and "code" as they appear in the 966 and 847 Power Ramp-Up Patents. Appx9748-9751. At that time, the ALJ had issued the Initial Determination in the 800 Investigation, but the Commission had not yet issued its Opinion adopting the ALJ's conclusions regarding the virtually identical terms from the 830 and 636 Power Ramp-Up Patents. *See* Appx9749-9750; *compare* Appx9799 (Initial Determination issued Jun. 28, 2013), *with* Appx10260 (Commission Opinion issued Dec. 20, 2013).

Consistent with the disclosure of the common patent specification, ZTE argued that these terms refer to the short codes disclosed in the common specification, which are not modulated by a data. Appx9749-9751. In the 613 Appeal, this Court had interpreted "code" to mean "a sequence of bits or chips." *InterDigital I*, 690 F.3d at 1324. The Court had

also recognized InterDigital's arguments that the short codes disclosed in the Power Ramp-Up Patents are not intended to and do not carry data. *Id.* at 1326. Thus, ZTE proposed interpreting "successively [transmits / transmitted] signals" to mean "successively [transmits / transmitted] sequences of chips *not modulated by a data signal.*" Appx9749 (emphasis added). In support of this construction, ZTE cited relevant portions of the common patent specification, as well as consistent testimony from InterDigital's expert witnesses, Drs. Jackson and Haas. Appx9750-9751. In addition, although not binding on the District Court, ZTE cited the ALJ's claim construction from the 800 Investigation as persuasive authority. Appx9749-9750.

On March 12, 2014, the District Court held a *Markman* hearing on this term and others in dispute. Appx6347. During the Markman hearing, ZTE again argued that the "successively transmitted signals" are the short codes described in the common patent specification, which the patents explain were used for the purpose of accomplishing a fast ramp-up with minimal overshoot. Appx6357 (42:1-19). Further, ZTE argued that the specification mandates that these short codes are not modulated by data. Appx6357-6358 (42:20 - 45:19). ZTE also addressed extensively the intervening

Commission Opinion issued by the ITC in the 800 Investigation on February 15, 2014. Appx6359-6360 (49:21 – 55:25). As part of that explanation, ZTE noted that the construction that the ALJ and the Commission adopted in the 800 Investigation (later affirmed by this Court) differs slightly in wording from the construction ZTE proposed to the District Court, but both constructions “embrace the most important concept, which is that the successively transmitted signals or the successively sent transmissions cannot be modulated by data prior to transmission.” Appx6359 (52:15-21).

InterDigital simply argued that the terms “successively [transmits / transmitted] signals” should be given their plain and ordinary meaning. Appx9748. In the alternative, InterDigital argued that “successively transmits signals” should be construed to mean “transmits signals one after the other.” *E.g.*, Appx6351 (17:17 – 18:21). InterDigital also argued that limiting the “successively transmitted signals” to signals that are not modulated by data would improperly restrict the claims to the preferred embodiment—the same argument that this Court later rejected in the 800 Appeal. *Compare* Appx6352 (21:14 – 22:7), *with InterDigital II*, 601 F. App’x at 978.

During the *Markman* hearing, the District Court tentatively ruled from the bench adopting a modified version of InterDigital's proposed constructions. The District Court tentatively construed "successively transmitted signals" to mean "successively transmits sequences of chips or bits." Appx6362 (62:3-5). The District Court declined to adopt ZTE's proposed construction that these signals are "not modulated by a data signal." *See id.* The District Court also tentatively interpreted the term "code" to mean "sequence of chips or bits." Appx6362 (61:19-22).

On April 22, 2014, the District Court issued a Memorandum Opinion on claim construction. Appx24. In it, the District Court repeated the constructions it had announced during the *Markman* hearing, interpreting "successively transmits signals" and "successively transmitted signals" to mean "successively [transmits / transmitted] sequences of chips or bits," and interpreting "code" to mean "sequence of chips or bits." Appx29.

2. Jury Trial

In October 2014, the District Court conducted a seven-day jury trial. The same three expert witnesses who had testified at the ITC regarding all four Power Ramp-Up Patents in the 800 and 868 Investigations also testified to the jury on topics related to the 966 and 847 patents.

InterDigital presented Dr. Jackson on the topic of infringement and Dr. Haas on the topic of validity. ZTE presented Dr. Apostolos Kakaes on the topics of non-infringement and invalidity.

As it had unsuccessfully argued at the ITC, InterDigital alleged that the “successively [transmits / transmitted] signals” limitation of the 966 and 847 patent claims reads on the generation of Preambles by ZTE’s products. Similarly, InterDigital argued that the Message generated by ZTE’s products satisfies the “message” (966 patent and claim 5 of the 847 patent) or “signal” (claim 3 of the 847 patent) to be generated after the subscriber unit receives an indication from the base station.

Dr. Kakaes testified that ZTE’s products do not infringe the 966 patent claims even under the District Court’s claim constructions because they do not generate successively transmitted signals and a message using a “same code.” Appx7997 (1141:6-20), Appx8008-8009 (1152:4 - 1153:11), Appx8012-8014 (1156:3 - 1158:11), Appx8024-8058 (1168:15 - 1202:14), Appx8062-8084 (1206:1 - 1228:17). Instead, as Dr. Kakaes explained, ZTE’s products follow the relevant portion of the 3GPP standard and generate the Preambles using the Preamble Scrambling Code and separately generate the Message using a different code known as the Message Part Scrambling

Code. Appx8027-8041 (1171:1 – 1185:8). Dr. Kakaes further testified that the Preamble Scrambling Code contains 4,096 binary values, as described in Sections 4.3.3 and 4.3.3.2 of the relevant standard document, 3GPP TS 25.213 (Appx8030 (1174:7-19), Appx8034-8036 (1178:18 – 1180:21)) and that the Message Part Scrambling Code contains 38,400 binary values, as described in section 4.3.2.5 of the same standard document (Appx8030 (1174:7-19), Appx8038-8040 (1182:20 – 1184:12)).

Both the Preamble Scrambling Code and the Message Part Scrambling Code are generated by the same code generator, Dr. Kakaes testified, consistent with the 3GPP standard. Appx8052-8058 (1196:1 – 1202:14), Appx8062-8067 (1206:12 – 1211:15). In relevant part, the code generator operates in accordance with a long, repeating, theoretical mathematical pattern of binary values known as “CLong,1, n.” Appx8049-8050 (1193:7 – 1194:9), Appx8052-8053 (1196:1 – 1197:3), Appx8056 (1200:3-11), Appx8068-8070 (1212:18 – 1214:9). The 3GPP standard defines CLong,1,n using an equation that provides for $2^{25} - 1$ (33,554,431) theoretical binary values. Appx8045-8047 (1189:18 – 1191:11), Appx8070-8071 (1214:10 – 1215:11). The code generator runs through the entire

CLong,1,n equation in a loop, generating different codes at different times as needed, on demand. Appx8054-8058 (1198:19 – 1202:3).

As Dr. Kakaes explained, when one of ZTE's accused products needs to transmit a Preamble, it requests that code and the code generator provides a specific 4,096-value Preamble Scrambling Code in accordance with the 3GPP standard. Appx8063-8064 (1207:1 – 1208:10). Likewise, when the product needs to transmit a Message, the code generator provides a specific 38,400-value Message Scrambling Code in accordance with the 3GPP standard. Appx8064-8065 (1208:11 – 1209:8). Dr. Kakaes emphasized that these are two different codes, having different lengths, and defined in different sections of the 3GPP standard specification. Appx8040-8041 (1184:13 – 1185:8). The fact that they are generated by the same code *generator* does not make them the "same code" required by the 966 patent claims and claim 5 of the 847 patent, Dr. Kakaes testified. Appx8066-8067 (1210:15 – 1211:15), Appx8082 (1226:7-17).

With respect to claim 3 of the 847 patent, Dr. Kakaes similarly testified that ZTE's products do not generate the Preamble using "a portion of a code" and the Message using "a remainder of the code," as the claims require. Appx8082-8083 (1226:18 – 1227:19). ZTE's products use the same

code generator, operating based on the equation for $CLong_{1,n}$, to produce the Preamble Scrambling Code and the Message Part Scrambling Code, Dr. Kakaes explained, but they are generated as different codes under the 3GPP standard, not a portion and a remainder of a single code. *Id.*

InterDigital's infringement expert, Dr. Jackson, opined that ZTE's products generate the Preambles and the Message using a "same code." Specifically, Dr. Jackson opined that ZTE's products use a code that is 42,496 binary values (or "chips") in length. He explained that ZTE's products generate the Preambles using the first 4,096 chips of this code and later generate the Message using the next 38,400 chips, which, when combined, form what Dr. Jackson called a 42,496-chip code. Appx7255-7257 (400:14-402:22), Appx7265-7267 (410:19-412:17), Appx7268-7269 (413:14-414:7), Appx7311-7312 (456:18-457:4).

However, Dr. Jackson admitted that *neither the 3GPP standard nor any other source* ever describes or defines those 42,496 chips as a single code. Appx7327 (472:5-24). On the contrary, Dr. Jackson admitted that he had to conjure together two distinct portions of the standard to arrive at his single "code." *Id.* Dr. Jackson did not and cannot dispute that section 4.3.3 of 3GPP TS 25.213 defines the first 4,096 binary values as the "PRACH

Preamble Scrambling Code,” and section 4.2.3.5 of the same document separately defines the other 38,400 binary values as the “PRACH Message Part Scrambling Code.” Appx7311-7313 (456:18 – 458:20). Dr. Jackson further admitted that neither ZTE’s products nor any other device ever generates all 42,496 values as a single code. Appx7327 (472:5-24) (“The standard gives you the 4,096 and the 38,400, but I’m not aware of any devices that adds them together to the 42,000.”). In essence, Dr. Jackson retrospectively combined two different codes, separately defined in the 3GPP standard, and called them a single, same code.

InterDigital’s expert on the topic of invalidity, Dr. Haas, came to exactly the opposite conclusion in order to preserve the validity of these patents. Dr. Haas analyzed the prior art combination of the “Quick” reference and the IS-95 standard and their use of a long, repeating, theoretical sequence known simply as the “long code.” E.g., Appx8311-8312 (1456:1 – 1457:10). IS-95 and Quick taught using “masks” to select different snippets of the theoretical long code to generate preambles and a message, respectively, and Dr. Haas testified that these two snippets are not parts of a “same code” (966 patent and claim 5 of the 847 patent) or a “portion of a code” and a “remainder of the code” (claim 3 of the 847

patent). *E.g.*, Appx8316-8320 (1461:1 – 1465:10). Specifically, Dr. Haas testified that it would be improper to “retrospectively” combine two separate portions of a long, theoretical sequence to provide the required “same code.” Appx8338-8339 (1483:5 – 1484:18). Dr. Haas reasoned that a code must be both defined and generated, which is why he said it would be improper to retrospectively combine two different codes and call them a “same code,” but that is exactly what Dr. Jackson did in his infringement analysis.

Dr. Kakaes explained why the testimony of Drs. Jackson and Haas cannot be reconciled. As Dr. Kakaes explained, ZTE’s products and the prior art IS-95 standard both used code generators to produce different codes from a single, long, repeating, theoretical sequence. Appx8123-8128 (1267:7 – 1272:14). Yet Dr. Jackson testified that two different codes produced by ZTE’s products from the long, repeating, theoretical CLong,1,n could be considered a “same code,” whereas Dr. Haas testified that two different codes produced from the long, repeating, theoretical IS-95 “long code” could not be considered a “same code.”

The jury nevertheless returned a verdict that ZTE’s products infringe both the 966 and 847 Power Ramp-Up Patents and that ZTE had not

proven either patent to be invalid based on the prior art. Appx21, Appx6855.

3. ZTE's Post-Trial Motion

ZTE timely moved for judgment as a matter of law during the October 2014 jury trial (Appx7720-7728 (865:6 – 873:10); Appx6808-6822) and renewed that motion in papers filed with the District Court on November 26, 2014 (Appx8742, Appx8769). With respect to the 966 and 847 Power Ramp-Up Patents, ZTE argued that the District Court should grant judgment of non-infringement as a matter of law because the jury verdict was unsupported by substantial evidence. Appx7727-7728 (872:7 – 873:10), Appx6815-6821, Appx8751-8755. ZTE argued that Dr. Jackson offered no evidence other than his conclusory opinion to support his testimony that the Preamble Scrambling Code and the Message Part Scrambling Code are parts of a “same code.” *Id.* Dr. Jackson offered no evidence that any document or device defines the combined 42,496 values (4,096 + 38,400) of these two scrambling codes as a single code. Appx6819-6820, Appx8751. Indeed, he testified that “[t]he standard gives you the 4,096 and the 38,400, but I’m not aware of any devices that adds them together to the 42,000.” Appx7327 (472:22-24). Further, Dr. Jackson’s

testimony was both internally inconsistent and contradicted by the testimony of InterDigital's other expert, Dr. Haas.

On November 26, 2016, InterDigital filed its opposition to ZTE's renewed motion for judgment as a matter of law. Appx8780-8818. ZTE filed a supporting reply brief in January 7, 2016. Appx8835-8848. On March 18, 2016, the District Court denied ZTE's motion, erroneously concluding that Dr. Jackson's testimony provided substantial evidence to support the jury's verdict and that Dr. Haas's testimony about validity did not undermine that substantial evidence. Appx8872-8882.

4. Rule 54(b) Judgment

On April 19, 2016, ZTE moved for Rule 54(b) judgment with respect to the 966 and 847 Power Ramp-Up Patents to pave the way for this appeal. Appx8884-8905. InterDigital filed an opposition to ZTE's motion on May 5, 2016, and ZTE filed a reply brief on May 16, 2016. Appx8906-8929. In an opinion issued on June 7, 2016, the District Court granted ZTE's motion. Appx8944-8950. On June 20, 2016, the District Court entered final judgment on the infringement claims as to the 966 and 847 patents under Rule 54(b). Appx21-23. The District Court held that there was "no just

reason for delay with respect to final judgment as to fewer than all the claims.” Appx22.

SUMMARY OF THE ARGUMENT

On *de novo* review, the Court should reverse the District Court’s claim construction of the phrase “successively [transmits / transmitted] signals” because it erroneously holds that the “successively transmitted signals” may be modulated with data. The District Court’s claim construction is inconsistent with this Court’s prior decisions on appeal from two ITC investigations and is contradicted by numerous admissions by InterDigital and its expert witnesses.

In the 613 Appeal, InterDigital argued that the disclosed “short codes” of the 966 and 847 patents are neither modulated with data nor intended to be modulated with data, and this Court accepted that argument. Then, in the 800 Appeal, the Court addressed the substantively identical phrase “successively [sends / sent] transmissions” from the 830 and 636 patents, which share a common specification with the 966 and 847 patents. Based on that common specification, the Court affirmed the ITC’s

determination that “successively sent transmissions” refers to the disclosed short codes, which are not modulated with data.

InterDigital and its expert witness have admitted that the phrase “successively [transmits / transmitted] signals” (claimed in the 966 and 847 patents) means the same thing as “successively [sends / sent] transmissions” (claimed in the 830 and 636 patents), that both phrases refer to the “short codes” disclosed in the common specification, and that the disclosed short codes carry no data. Thus, for exactly the same reasons that supported its decisions in the 613 and 800 Appeals, the Court should reverse the District Court’s construction of “successively [transmits / transmitted] signals” and construe that limitation to mean “successively [transmits / transmitted] sequences of chips *not modulated by a data signal*.”

The Court should also reverse the District Court’s denial of judgment as a matter of law on the issue of infringement. The jury verdict, which rests on nothing more than conclusory and contradictory expert testimony, is unsupported by substantial evidence.

The asserted 966 patent claims and claim 5 of the 847 patent require the use of a “same code” to generate two things – (1) the successively transmitted signals and (2) a message. Similarly, claim 3 of the 847 patent

requires generating one thing (the successively transmitted signals) using “a portion of a code,” and generating a second thing (a signal) using “a remainder of the code.” Both patents require identifying *a single code*.

However, InterDigital’s infringement expert, Dr. Jackson, failed to identify a single code. Instead, based solely on his conclusory opinion, Dr. Jackson retrospectively and improperly combined two distinct codes in his infringement analysis. Dr. Jackson’s opinion is contradicted by the 3GPP standard, which expressly defines two *different codes*, of different lengths, defined in different sections of the standard specification, and generated at different times.

Dr. Jackson’s conclusory testimony was further contradicted by both ZTE’s expert *and by InterDigital’s validity expert*, who testified that it is improper to retrospectively combine two different codes and call them a “same code.” Because this critical part of InterDigital’s infringement case was supported by nothing more than conclusory testimony that was contradicted by the product documentation and the other testifying experts, it lacked substantial evidence, and the infringement verdict should be reversed.

ARGUMENT

A. STANDARD OF REVIEW

The issue of claim construction is ultimately a question of law that is reviewed *de novo*, while underlying factual determinations are reviewed for clear error. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837–39 (2015). Where the district court’s determination was based solely on intrinsic evidence such as the patent claims, specification, and prosecution history, the determination amounts to a question of law that this Court reviews *de novo*. *Cardsoft, LLC v. VeriFone, Inc.*, 807 F.3d 1346, 1350 (Fed. Cir. 2015) (quoting *Teva*, 135 S. Ct. at 842).

As to a district court’s denial of a motion for judgement as a matter of law, that judgment is reviewed under the law of the regional circuit in which the appeal would normally be heard. *Summit Tech., Inc. v. Nidek Co.*, 363 F.3d 1219, 1223 (Fed. Cir. 2004). In the Third Circuit, the grant or denial of JMOL is reviewed without deference to determine whether substantial evidence supports the jury’s verdict. *Rinehimer v. Cemcolift, Inc.*, 292 F.3d 375, 383 (3d Cir. 2002). Where an infringement verdict relies on an incorrect claim construction, and no reasonable jury could have found infringement under the proper claim construction, this Court may reverse

the district court's determination with respect to JMOL without remand. *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1333 (Fed. Cir. 2008); *see also Eon Corp. IP Holdings LLC v. Silver Spring*, 815 F.3d 1314, 1320-23 (Fed. Cir. 2016).

**B. THE DISTRICT COURT ERRONEOUSLY CONSTRUED
“SUCCESSIVELY [TRANSMITS / TRANSMITTED]
SIGNALS”**

The District Court erred in its claim construction by construing the term “successively transmitted signals” to include signals that are modulated by data. When properly read in light of the specification, and consistent with this Court's prior decisions, it is clear that the successively transmitted signals are the disclosed “short codes,” which undisputedly do not carry data. The District Court's construction is inconsistent with this Court's prior decisions, the patent specification, the purpose of the claimed invention, and a multitude of admissions from InterDigital and its expert witnesses. On *de novo* review, the Court should construe “successively transmits signals” to mean “successively [transmits / transmitted] sequences of chips *not modulated by a data signal.*”

1. This Court Has Already Construed “Virtually Identical” Terms from Related Patents Based on a Common Specification

As stated above, the Court has twice addressed the crux of this claim construction dispute. In the 613 Appeal, addressing the very same 966 and 847 Power Ramp-Up Patents at issue here, InterDigital argued that the “short codes” described in the common specification’s “only two embodiments” are “unmodulated by data.” *InterDigital I*, 690 F.3d 1318, 1326 (Fed. Cir. 2012). The Court relied on that argument and the disclosure from the common specification in concluding that the disclosed short codes carry no data (*i.e.*, the short codes are not modulated with data). *Id.*

In the 800 Appeal, the Court affirmed the Commission’s claim construction based in part on its conclusion from the 613 Appeal. *InterDigital II*, 601 F. App’x 972, 977-79 (Fed. Cir. 2015). Specifically, the Court addressed the other two Power Ramp-Up Patents – the 830 and 636 patents – which share the same common specification as the 966 and 847 patents at issue here and in the 613 Appeal. *Id.* Based on this common specification, the Court ultimately affirmed the Commission’s determination that “successively sends transmissions” should be interpreted to mean “transmits to the base station, one after the other,

codes that are shorter than a regular length code.” *Id.* at 979. The Court also affirmed the Commission’s conclusion that these “successively sent transmissions” correspond to the “short codes” disclosed in the common specification, which “*are neither modulated with data, nor used to modulate data.*” *Id.* at 977-79 (emphasis added).

In affirming the ITC’s construction of “successively [sends / sent] transmissions” in the 830 and 636 patents, the Court rejected four arguments InterDigital made to the contrary. *Id.* The Court’s reasoning applies equally to the 966 and 847 patents at issue in this appeal.

First, the Court rejected InterDigital’s argument that the phrase should be interpreted more broadly to avoid limiting it to the preferred embodiment disclosed in the specification. *Id.* at 977-78. The Court acknowledged that some of the limiting language in the specification follows a description of the preferred embodiment. *Id.* Nevertheless, the Court held that this argument does not carry sufficient weight because the entire invention is described by reference to the preferred embodiment, and the patent expressly ties the “carries-no-data” limitation to the purpose of the short codes. *Id.* at 978. Likewise, the 966 and 847 patents at issue

here share the same common specification as the 830 and 636 patents, so the exact same reasoning applies.

Second, InterDigital argued that the Commission's construction excludes an express preferred embodiment disclosed in U.S. Patent 5,799,010 ("010 patent"), which allegedly is incorporated by reference. *Id.* at 978. The Court held that InterDigital failed to develop this argument, which rested only on conclusory statements about what the 010 patent discloses. The record of the present appeal likewise includes nothing more than conclusory attorney argument about what the 010 patent discloses. *Id.*

Third, InterDigital argued that the Commission erred by relying on evidence that the invention would not work if the short codes carried data. The Court held that this argument was unnecessary anyway, and "[t]he Commission's construction can stand without this support." *Id.* at 978-79. ZTE makes no such argument in this appeal, and the Court can render its claim construction irrespective of that argument, just as it affirmed the Commission's construction in the 800 Appeal.

Fourth, InterDigital presented a claim differentiation argument. Specifically, InterDigital argued that the Commission's construction of "successively [sends / sent] transmissions" in the 830 and 636 patents

improperly failed to differentiate from certain claims of other patents not directly at issue in the 800 Appeal, including independent claims 1, 2, 8, and 10 of the 847 patent. *Id.* For example, those claims each recite that “the [successively] transmitted signals carry no data of the subscriber unit.” *Id.* Implicitly acknowledging that the phrases “successively sent transmissions” and “successively transmitted signals” should be interpreted to mean the same thing, InterDigital argued that it would be improper to limit either term to transmissions or signals that carry no data where certain independent claims of the 847 patent separately recite that requirement. *Id.*

The Court rejected this argument too. It began by noting, as the Commission had, that “claim differentiation arguments are at their strongest when distinguishing dependent claims from independent claims.” *Id.* at 979 (*citing World Class Tech. Corp. v. Ormco Corp.*, 769 F.3d 1120, 1125 (Fed. Cir. 2014)) (“The doctrine of claim differentiation creates a presumption that distinct claims, particularly an independent claim and its dependent claim, have different scopes.”) By contrast, InterDigital was “attempting to extract meaning by comparing independent claims that are distinguishable in other ways.” *Id.* (*citing Andersen Corp. v. Fiber*

Composites, LLC, 474 F.3d 1361, 1370 (Fed. Cir. 2007)) (“A further reason for not applying the doctrine of claim differentiation in this case is that the [claims at issue] are not otherwise identical Instead, there are numerous other differences varying the scope of the claimed subject matter.”). Finally, the Court noted that InterDigital was relying on claim differentiation with respect to a patent that was not even at issue in the 800 Appeal. Based on all of these factors, the Court concluded that “[t]he force of claim differentiation here is diminished and insufficient to overcome the evidence supporting the Commission’s construction.” *Id.*

With one exception, the Court’s reasoning applies equally to this appeal. The only difference is that the 847 patent is directly at issue in this appeal, but that difference does not change the ultimate conclusion. Any claim differentiation argument would still be diminished because it rests on a comparison of independent claims that are distinguishable in other ways. For example, none of claims 1, 2, 8, or 10 includes the “generated using a same code” limitation of claim 5 or the “generated using a portion of a code” and “generated using a remainder of the code” limitations of claim 3. Appx170-172. The fact that these independent claims appear in the same patent, as opposed to a related patent sharing the same common

specification, does not change the analysis. Either way, the Court's analysis of that common specification applies here, and a diminished claim differentiation argument resting on independent claims of different scope is insufficient to overcome the overwhelming evidence supporting the "not modulated by data" claim construction.

Because the District Court's construction in this appeal runs counter to both of the Court's prior decisions, it should be reversed.

2. Admissions By InterDigital and its Expert Witnesses Contradict the District Court's Claim Construction

InterDigital and its expert witnesses have repeatedly made three key admissions relevant to this claim construction dispute: (1) the "successively transmitted signals" at issue here and the "successively sent transmissions" recited in the related 830 and 636 patents mean the same thing; (2) both of those phrases refer to the "short codes" disclosed in the specification that is common to all four Power Ramp-Up Patents; and (3) the disclosed short codes are not modulated with data. Collectively, these admissions reinforce this Court's previous decisions and compel reversing the District Court's claim construction.

**a. “Successively Transmitted Signals” and
“Successively Sent Transmissions” Mean the
Same Thing**

All four Power Ramp-Up Patents claim priority to the same application filed in 1996. Through years of prosecution, InterDigital presented and obtained claims using slightly different language to describe the same concepts disclosed in that original 1996 application. The pertinent example here is the phrase “successively transmitted signals” (recited in the 966 and 847 patents at issue here and in the 613 Appeal) and the phrase “successively sent transmissions” (recited in the related 830 and 636 patents at issue in the 800 Appeal), which InterDigital has admitted mean the same thing.

Specifically, InterDigital’s infringement expert, Dr. Jackson, admitted that these two phrases are “virtually identical.” Appx10348. The ALJ in the 868 Investigation relied in part on this admission in determining that the two phrases are “essentially interchangeable and substantively identical” (Appx10344, Appx10348), a determination that the Commission adopted without review (Appx10491-10492). InterDigital later cited this portion of the ALJ’s decision in support of its motion to stay the 868 Appeal pending resolution of the 800 Appeal. Appx10527, at n.2. After this Court

decided the 800 Appeal in ZTE's favor, InterDigital voluntarily dismissed the 868 Appeal. Appx105421.

b. The "Successively Transmitted Signals" and "Successively Sent Transmissions" Refer to the Short Codes

In the 800 Investigation, Dr. Jackson admitted that the "successively sent transmissions" are the short codes disclosed in the common specification:

Q. All right. Now the successively sent transmissions of claim 1, those are the short codes described in the 830 patent, correct?

A. Yes, the repeated transmissions of the short code are the successively sent transmissions.

InterDigital II, 601 F. App'x at 977 (quoting Appx10288 (800 Investigation, Commission Decision, at 28)). InterDigital made similar admissions in its 800 Appeal briefing. Appx10577. Ultimately, both the Commission in the 800 Investigation and this Court in the 800 Appeal relied on Dr. Jackson's testimony in construing the "successively [sends / sent] transmissions" to be the disclosed short codes. *InterDigital II*, 601 F. App'x at 977 (quoting Appx10288 (800 Investigation, Commission Decision, at 28)).

All four Power Ramp-Up Patents rest on the same common specification, and "successively transmitted signals" means the same thing

as “successively sent transmissions.” Therefore, both phrases are necessarily limited to the disclosed short codes.

c. The Short Codes Are Not Modulated With Data

Continuing his testimony in the 800 Investigation, Dr. Jackson admitted that the short codes disclosed in the common specification are not modulated by data:

Q. And in the power ramp-up patents, the short code is not applied to a data signal, correct?

A. Correct.

InterDigital II, 601 F. App’x at 977. Again, the Commission and this Court relied on this testimony in construing “successively [sends / sent] transmissions” to be short codes that are not modulated with data. *Id.*

Previously, at InterDigital’s urging in the 613 Appeal, this Court expressly concluded that the short codes “carry no data and are not intended to do so.” *InterDigital I*, 690 F.3d at 1326. The Court cited this ruling again in the 800 Appeal when it interpreted “successively [sends / sent] transmissions” to include the “not modulated by data” limitation. *InterDigital II*, 601 F. App’x at 977.

Collectively, these arguments and admissions from InterDigital and its experts led this Court to conclude that the disclosed short codes are not

modulated by data in both the 613 and 800 Appeals. The same arguments and admissions compel construing the “successively transmitted signals” consistently in this appeal.

3. The Two-Part Construction Affirmed in the 800 Appeal Is An Alternative to ZTE’s Proposed Construction

ZTE argued below and maintains here that “successively [transmits / transmitted] signals” should be construed to mean “successively [transmits / transmitted] sequences of chips *not modulated by a data signal*.” Appx9749. This is the same construction adopted by the ALJ and the Commission in the 868 Investigation after a lengthy and careful analysis of this Court’s decisions in the 613 and 800 Appeals. Appx10339-10350, Appx10491-10492.

In the 800 Investigation, the two-part construction adopted by the Commission used somewhat different wording but captured substantially the same scope, (1) interpreting “successively sends transmissions” to mean “transmits to the base station, one after the other, codes that are shorter than a regular length code,” and (2) concluding that these codes correspond to the “short codes” disclosed in the common specification, which “do not modulate data and are not intended to do so.” Appx10285.

This Court affirmed that construction in the 800 Appeal. *InterDigital II*, 601 F. App'x at 977.

Of course, irrespective of the constructon ZTE argued below, this Court is free to adopt the two-part construction it affirmed in the 800 Appeal. *Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1323-24 (Fed. Cir. 2008) (recognizing this Court's "independent obligation to construe the terms of a patent" irrespective of the parties' proposed constructions). Both constructions capture the critical feature that the successively transmitted signals are *not modulated by data*.

C. THE DISTRICT COURT ERRED IN ITS FINDING THAT SUBSTANTIAL EVIDENCE SUPPORTS THE JURY'S INFRINGEMENT VERDICT

This issue turns on whether two different scrambling codes defined in the 3GPP standard, known as the Preamble Scrambling Code and the Message Part Scrambling Code, may be considered the "same code" (966 patent and claim 5 of the 847 patent) or a "portion of a code" and a "remainder of a code" (claim 3 of the 847 patent). Dr. Jackson offered only conclusory testimony in the affirmative, and the weight of the evidence contradicted him. Even viewing all of the evidence in a light most favorable to InterDigital, no reasonable jury could have found in its favor,

and the Court should reverse the denial of ZTE's motion for judgment as a matter of law. *See The Johns Hopkins Univ. v. Datascope Corp.*, 543 F.3d 1342, 1348 (Fed. Cir. 2008) (reversing denial of JMOL on the issue of infringement); *SIBIA Neurosciences, Inc. v. Cadus Pharm. Corp.*, 225 F.3d 1349, 1354 (Fed. Cir. 2000) (reversing denial of JMOL on the issue of obviousness).

Most of the relevant facts are undisputed. For example, it is undisputed that ZTE's products generate at least two types of signals during a random access procedure. Appx8030-8040 (1174:7 - 1184:12), Appx7311-7313 (456:18 - 458:20), Appx8966, Appx8972. These signals are known as the Preambles and the Message. *Id.* In accordance with the 3GPP standard, ZTE's products generate the Preambles using the Preamble Scrambling Code defined in section 4.3.3.2 of 3GPP TS 25.213 (trial exhibit DX-346). Appx8972, Appx8031-8036 (1175:14 - 1180:21), Appx7311-7312 (456:18 - 457:23), Appx7314 (459:16-24). The Preamble Scrambling Code is defined to be 4,096 binary values in length. *Id.* Separately, but also in accordance with the 3GPP standard, ZTE's products generate the Message using the Message Part Scrambling Code defined in section 4.3.2.5 of 3GPP TS 25.213. Appx8971, Appx8036-8040 (1180:22 - 1184:12), Appx7313 (458:1-

20), Appx7314 (459:16-24). The Message Part Scrambling Code is defined to be 38,400 binary values in length. *Id.*

ZTE's products create the Preamble Scrambling Code and the Message Part Scrambling Code using a scrambling code generator. Appx8052-8058 (1196:1 – 1202:14), Appx8062-8067 (1206:12 – 1211:15), Appx7327 (472:10-24). The code generator is programmed to produce a variety of different codes based on a repeating pattern of binary values defined by an equation known as $CLong_{1,n}$. Appx8049-8051 (1193:7 – 1195:24), Appx8056-8057 (1200:17 – 1201:21), Appx7327 (472:10-24). If produced in its entirety, the theoretical sequence provided by $CLong_{1,n}$ would be $2^{25} - 1$ (33,554,431) binary values in length. Appx8045-8048 (1189:5 – 1192:16), Appx7336-7339 (481:13 – 484:10). This is theoretical because ZTE's products never generate all of the values for $CLong_{1,n}$. Appx8048-8049 (1192:19 – 1193:6), Appx8051 (1195:13-24), Appx7339 (484:11-20).

When one of ZTE's products needs to transmit a Preamble, in accordance with the 3GPP standard the code generator creates the Preamble Scrambling Code by producing the first 4,096 binary values defined by the $CLong_{1,n}$ equation. Appx8057 (1201:3-9), Appx8063-8064

(1207:1 – 1208:10), Appx7311-7312 (456:18 – 457:23). Later, when the device needs to transmit a Message, the code generator creates the Message Part Scrambling Code from the 3GPP standard by producing the next 38,400 binary values defined by the CLong,1,n equation. Appx8057 (1201:10-13), Appx8064 (1208:11 – 1209:8), Appx7313 (458:1-20), Appx7327 (472:10-24). In between these two times, the code generator does not produce any values. Appx8063-8064 (1207:23 – 1208:10), Appx7327 (472:10-24).

On the record of these undisputed facts, Dr. Jackson artificially combined the Preamble Scrambling Code (4,096 binary values) and the Message Part Scrambling Code (38,400 binary values) and testified that this combination is the “same code.” Appx7317-7323 (462:7 – 468:10). By Dr. Jackson’s own admission, the product documentation never defines the combined 42,496 binary values as a “code.” Appx7327 (472:10-24). As discussed below, he admitted that he had never seen these combined binary values defined as a code anywhere. *Id.* The only evidence is his conclusory opinion. Moreover, Dr. Jackson’s testimony on this point is contradicted by InterDigital’s other expert witness, Dr. Haas, who testified on the topic of validity. Taken as a whole, this record lacks substantial evidence to support the infringement verdict. *See Johns Hopkins*, 543 F.3d

at 1348 (reversing district court's denial of JMOL for non-infringement because it rested solely on the opinion of the patent owner's infringement expert, which was unsupported and contradictory).

1. The Expert Testimony on the "Same Code" Limitations Was Conclusory and Contradicted by the Documentary Evidence

Dr. Jackson was InterDigital's expert witness on the subject of infringement. To prove that ZTE had infringed the 966 and 847 patents, Dr. Jackson needed to show that ZTE's products use a "same code" (966 patent and claim 5 of the 847 patent) or a "portion of a code" and a "remainder of the code" (claim 3 of the 847 patent) to generate the Preambles and the Message, respectively. In other words, both patents require using a *single code* to generate both signals, and it was Dr. Jackson's job to identify that code in ZTE's products. In his effort to accomplish this, Dr. Jackson retrospectively combined *two different codes* and called the combination a single, same code.

The two codes Dr. Jackson combined are the Preamble Scrambling Code, which undisputedly contains 4,096 binary values, and the Message Part Scrambling Code, which undisputedly contains 38,400 binary values. Appx7327 (472:10-24), Appx8034-8036 (1178:18 – 1180:21), Appx8039-8040

(1183:2 – 1184:12). In his testimony, Dr. Jackson combined these two codes and treated the combined 42,496 binary values as a single code:

Q. Now, you testified here today that C long,1,n consist of 42,900 -- excuse me, get my digits correct. 42,496 binary values. Do I have that correct?

A. I'm not sure I said binary values. I think I said chips or zeros and ones. But I'm pretty sure I did say 42,496.

Q. That's C long,1,n is what you contend in ZTE's phones in the Qualcomm chips is the same code, am I right about that?

A. Yes.

Q. And in your opinion that C long,1,n is 42,496 chips or binary values in length?

A. And that's what the handsets make.

Q. And you contend that those handsets infringe the claims of the '966 and '847 patents because they generate those 42,496 values right on the phone; right?

A. And one after another, yeah.

Q. And in your opinion, those 4,000 -- 42,496 chips are the same code according to the patents?

A. Yes, they come out of the scrambling code generator one after the other.

Appx7322-7323 (467:12 – 468:10). The problem is that there is no evidence other than Dr. Jackson's conclusory testimony that defines the combination of these 42,496 values as a code.

The 3GPP standard specification does not define the combination of 42,496 binary values as a code. Appx7327 (472:10-24), Appx8071-8073 (1215:15 – 1217:12). It separately defines the 4,096-value Preamble Scrambling Code and the 38,4000-value Message Part Scrambling Code,

but it never defines or describes them collectively as one code. *Id.*

Dr. Jackson also cited source code and a high-level design document from Qualcomm, the supplier of the underlying processor used in ZTE's products (e.g., Appx7217-7237 (362:4 - 382:4), Appx7267-7270 (412:18 - 415:24)), but none of those materials define the combined 42,496 binary values as a code (Appx7327 (472:10-24), Appx8077 (1221:10-16)). Indeed, Dr. Jackson admitted that neither the 3GPP standard nor "any device" ever defines his purported 42,496-value "same code":

Q. In the phones -- okay. So we have established that the standard defines C long,1,n. *Does the standard ever use the number 42,496 to describe the length of C long,1,n?*

A. *Not to my knowledge.*

Q. Now, your testimony here today is that in ZTE's phones, the length of C long,1,n is 42,496 chips, correct?

A. My testimony is that the phones generate a sequence of chips. The hardware generates -- the scrambling code generator generates 4,096 chips, basically the hardware hits a pause button and it starts it up again and it runs it again for another 38,400. But if you were to look, for example, the standard does refer to that first 38,400, if you look at the first 4,096 plus the rest that is a number that's discussed in the standard. *The standard gives you the 4,096 and the 38,400, but I'm not aware of any device that adds them together to the 42,000.*

Appx7327 (472:10-24).

ZTE's expert, Dr. Kakaes, confirmed that the 3GPP standard does not define Dr. Jackson's combination of 42,496 values as a code:

Q. Dr. Jackson does point to something in the ZTE phones, or he says there is something in ZTE's phones that he calls a same code, or he says it's the same code, and he calls it C long 1N; is that right?

A. That's my understanding of his testimony, yes.

Q. What is that that he's pointing to and calling C long 1N?

A. What Dr. Jackson points to is the scrambling code, which has the 4,000 binary values, and then he puts next to it the message part scrambling code, which is the 38,000 values. Again, rounding the numbers here for convenience. And then he says, well, you have 4,000 here and 38,000 here. You have this together is 42,000, and that's the same code. And sometimes you use part of it and sometimes you use the rest of it. And that is your same code. That's Dr. Jackson's argument, as I understand it.

Q. Does the standard define a code that way?

A. *No, nowhere in the standard is there such a definition of a 42,000 long code.*

Q. At the risk of repetition, what does the standard define?

A. The standard defines for the random access procedure, defines two codes: The preamble scrambling code and the message part scrambling code, the code that we've been talking about. Again, the standard has other sections we have not talked about that defines other scrambling codes that are used for other purposes, but in none of those cases is there a code that is of the 42,000 length. It just does not exist, the standards or anywhere.

Q. And to be precise, if we did combine these two separate scrambling codes of 4,096 chips and 38,400 chips, the total length of that thing would be 42,496; is that right?

A. I'm glad you called it that thing, because I don't know what else one would call it. Yes, that would be, 4,000 plus 38,000 is 42,000. *So, yes, that thing would be 42,000, but it's not a code, it's not defined as a code, it's not used as a code, it's not it's not generated as a code and it's not a code.*

Appx8071-8073 (1215:15 – 1217:12) (emphases added).

To reach his conclusion, Dr. Jackson erroneously focused on the code generator rather than the codes themselves. There is no dispute that ZTE's products use the same code generator to produce the Preamble Scrambling Code and the Message Part Scrambling Code. Appx8057 (1201:3-13), Appx8063-8065 (1207:1 – 1209:8), Appx7311-7313 (456:18 – 458:20), Appx7327 (472:10-24). But the two codes are produced at *different* times, in response to *different* code generation requests, in accordance with *different* sections of the 3GPP standard specification, and they have *different* lengths, and contain *different* values. Appx8040-8041 (1184:13 – 1185:8), Appx 7327 (472:10-24). The fact that both codes come from the same code generator does not make them the same code, or even a portion and remainder of a single code.

In his testimony, Dr. Jackson analogized the code generator to a DVD player that is “paused” in between generating the Preamble Scrambling Code and the Message Part Scrambling Code. Appx7320 (465:8-14),

Appx7327 (472:10-24). But, again, this analogy focuses improperly on the code generator, rather than the different codes it is producing.

A better analogy, provided by ZTE's expert, Dr. Kakaes, is a CD player that plays different songs. Appx8067-8068 (1211:6 - 1212:17), Appx8073 (1217:2-20). A listener may press the "pause" button after listening to a first song and then press the "play" button to listen to a second song. *Id.* Both songs come from the same CD player (and may even use some of the same notes), but they are *different songs* because that is how the artist created and defined them. Likewise, the same code generator in ZTE's products produces the Preamble Scrambling Code and the Message Part Scrambling Code, but they are not the same code. Nor are they a portion and remainder of a same code. They are *different codes* because that is how the 3GPP standard defines them. Dr. Jackson's conclusory testimony cannot change these facts.

2. The Conclusory Expert Testimony and the Infringement Verdict Were Also Contradicted by InterDigital's Other Expert Witness

Dr. Jackson's testimony about the "same code" being a combination of the Preamble Scrambling Code and the Message Part Scrambling Code was also contradicted by InterDigital's other expert, Dr. Haas, who testified

on the topic of validity. On rebuttal to ZTE's invalidity case, Dr. Haas testified that it is improper to "retrospectively combine" two different parts of a theoretical sequence and treat them as a "same code," which is exactly what Dr. Jackson did.

ZTE's invalidity defense focused on the prior art combination of the 2G cellular standard known as IS-95 and the "Quick" reference. Appx8085-8087 (1229:1 – 1231:23), Appx8115-8128 (1259:3 – 1272:14). Like the 3GPP WCDMA standard, IS-95 and Quick also included a random access procedure in which a mobile device transmitted preambles and messages to the base station. Appx8090-8100 (1234:20 – 1244:6). IS-95 provided for a single code generator to produce codes for generating the preambles and messages. Appx8123-8128 (1267:7 – 1272:14). The code generator was programmed to produce a repeating pattern of binary values defined by an equation known as the "long code." *Id.* Much like the 33,554,431 theoretical values of $C_{Long,1,n}$, the "long code" is a long, theoretical sequence of values. Appx8123-8124 (1267:20 – 1268:16).

To produce each code, the IS-95 code generator used a "mask" that identified the starting point within the "long code" sequence and the length of the desired code. Appx8125-8126 (1269:3 – 1270:24). To produce

another code, the IS-95 code generator would select a different “mask” and apply it to the theoretical long code. *Id.* Thus, all codes from the IS-95 code generator were produced from masks of the same theoretical “long code,” just like the Preamble Scrambling Code and the Message Part Scrambling Code produced by the code generator in ZTE’s products come from different parts of the theoretical sequence CLong,1,n. Appx8123-8124 (1267:20 – 1268:16).

But Dr. Haas testified clearly and emphatically that the codes produced by the IS-95 code generator were not the “same code” or a “portion of a code” and a “remainder of the code,” as required by the 966 and 847 patent claims. *E.g.*, Appx8311-8312 (1456:1 – 1457:10). In fact, Dr. Haas testified that there are two requirements for identifying a “same code,” and he acknowledged that the requirements must be applied in the same way for both infringement and validity:

Q. Right. But the way you apply – for example, the same code language from the claim, you have to apply it the same way, whether it's in the context of infringement or validity, right?

A. I agree that one cannot have two different same subject, one talking about infringement and then going to validity and saying something else. I agree with you. It has to be consistent.

Q. Thank you. All right. Now, you would agree that there are two requirements for a same code, right?

A. Well, you tell me what you're referring to, sir. Which two requirements are you referring to?

Q. We'll work through them one at a time?

A. Yes.

Q. Number one, it has to be a sequence of chips, right?

A. It has to be a sequence of chips as the Court defined.

Q. Which means that it has to be generated, is that right?

A. That's absolutely correct, sir.

Q. Number two, it cannot be some random sequence of chips that you take a portion from here and a portion from there and retrospectively say, here it is, a sequence of chips. Can't do that, right?

A. Absolutely, and this is exactly what I said in my deposition on the subject, sir.

Q. It has to be something, that same code has to be something which is somehow *defined* to be a sequence, to be a code; is that right?

A. Correct. It cannot be some random thing that *you put together retrospectively* and say, this is the same code.

Q. Because each time you generate something, retrospectively you can't say, I'm taking a portion, stuck it together with another portion and created a code. You can't do that, can you?

A. You cannot. Otherwise it would be *completely meaningless*.

Q. That same code cannot be random pieces somehow selected retrospectively to create this code, is that correct?

A. Indeed, sir.

Appx 8337-8339 (1482:18 – 1484:18) (emphases added).

Dr. Jackson did exactly what his colleague Dr. Haas said should not be done. Dr. Jackson took two different codes and *retrospectively*

combined them. By Dr. Jackson's own admission, the resulting combination of 42,496 values is *not defined* anywhere except in his testimony. Appx7327 (472:10-24). According to Dr. Haas, the result of Dr. Jackson's analysis is "*completely meaningless.*" Appx8339 (1484:3-14) (emphasis added). In the face of this countervailing evidence from both the 3GPP Standard and InterDigital's other expert witness, Dr. Jackson's conclusory testimony on the "same code" and "portion of a code" / "remainder of the code" limitations is insufficient to support the jury verdict. The District Court erred in denying judgment of non-infringement as a matter of law, and this Court should reverse.

CONCLUSION

For the foregoing reasons, ZTE urges the Court to reverse the District Court's claim construction and to interpret "successively [transmits / transmitted] signals" to mean "successively [transmits / transmitted] sequences of chips not modulated by a data signal," consistent with its prior decisions in the 613 and 800 appeals and the admissions by InterDigital and its expert. ZTE also urges the Court to reverse the District

Court's decision denying judgment of non-infringement as a matter of law because the jury verdict is not supported by substantial evidence.

Dated: November 17, 2016

/s/ Charles M. McMahon

Charles M. McMahon
Brian A. Jones
McDERMOTT WILL & EMERY LLP
227 West Monroe Street
Chicago, IL 60606
(312) 372-2000

Jay H. Reiziss
Natalie A. Bennett
McDERMOTT WILL & EMERY LLP
The McDermott Building
500 North Capitol Street, Northwest
Washington, DC 20001
(202) 756-8000

Counsel for Appellants
ZTE Corporation and ZTE (USA) Inc.

ADDENDUM

TABLE OF CONTENTS

Addendum Pursuant to Federal Circuit Rule 28(a)(11)

No.	Date	Description
Appx21	06/20/2016	Partial Final Judgment Under 54(b) (Dkt. No. 587)
Appx24	04/22/2014	Claim Construction Memorandum (Dkt. No. 253)
Appx42	04/29/2014	Claim Construction Order (Dkt. No. 260)
Appx56	03/18/2016	Memorandum Opinion (Dkt. No. 571)
Appx67	03/18/2016	Order (Dkt. No. 572)

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

INTERDIGITAL COMMUNICATIONS,
INC., a Delaware corporation,
INTERDIGITAL TECHNOLOGY
CORPORATION, a Delaware corporation,
IPR LICENSING, INC., a Delaware
corporation, and INTERDIGITAL
HOLDINGS, INC., a Delaware corporation,

Plaintiffs and Counterclaim
Defendants,

v.

ZTE CORPORATION, a Chinese corporation,
and ZTE (USA) INC., a New Jersey
corporation,

Defendants and
Counterclaim Plaintiffs.

Civil Action No.: 1:13-cv-00009-RGA

JURY TRIAL DEMANDED

PROPOSED PARTIAL FINAL JUDGMENT UNDER 54(b)

WHEREAS, Plaintiffs InterDigital Communications, Inc., InterDigital Technology Corporation, IPR Licensing, Inc., and InterDigital Holdings, Inc. (collectively, "InterDigital") filed the instant multiple-claim action against ZTE, asserting infringement of four patents;

WHEREAS the Court bifurcated patent liability issues from damages issues on February 11, 2014 (D.I. 213);

WHEREAS, on October 28, 2014, a jury found that claims 1, 3, 6, 8, 9, and 11 of U.S. Patent No. 7,190, 966 ("the '996 Patent") and claims 3 and 5 of U.S. Patent No. 7,286,847 ("the '847 Patent") were infringed by Defendants ZTE Corp. and ZTE (USA) Inc.'s (collectively, "ZTE") and not invalid (D.I. 431);

WHEREAS, on November 12, 2014, the court entered judgment for InterDigital on Counts I and II of the Amended Complaint and against ZTE on its non-infringement and invalidity defenses and counterclaims as to the '966 and '847 Patents (Counts V and VI of ZTE's Amended Answer) (D.I. 456);

WHEREAS, on March 18, 2016, the Court denied ZTE's post-trial motions as to the '996 and '847 Patents (D.I. 572);

WHEREAS, on April 18, 2016, the Court granted the parties' joint stipulation to dismiss with prejudice all of ZTE's remaining counterclaims in their entirety, as well as all of ZTE's remaining affirmative defenses associated with the patent liability issues for the '966 and '847 Patents (D.I. 577);

WHEREAS, for the reasons set forth in its Order of and Opinion of June 7, 2016, pursuant to Federal Rule of Civil Procedure 54(b), this Court determined there is no just reason for delay with respect to the entry of final judgment as to fewer than all the claims (D.I. 584, 585);

WHEREAS, with respect to the '966 and '847 Patents, no infringement liability issues remain to be litigated and only the bifurcated damages issues are pending;

IT IS HEREBY ORDERED, ADJUDGED AND DECREED THAT that:

1. The Court expressly determines, pursuant to Rule 54(b) of the Federal Rules of Civil Procedure, that there is no just reason for delaying entry of final judgment as to the patent infringement liability issues for the '996 and '847 Patents);

2. Accordingly, the Court hereby enters final judgment as to the patent infringement liability issues for the '966 and '847 Patents in favor of InterDigital and against ZTE (Counts I

and II of Plaintiff's Amended Complaint and Counterclaims V and VI of Defendant's Amended Answer).

3. The Court retains jurisdiction over damages and all other issues remaining in this case.

IT IS SO ORDERED, ADJUDGED and DECREED.

Dated : June 20, 2016

Richard G. Andrews
Honorable Richard G. Andrews

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

**INTERDIGITAL COMMUNICATIONS,
INC., *et al.*,**

Plaintiffs and
Counterclaim
Defendants;

v.

ZTE CORP., *et al.*,

Defendants and
Counterclaim
Plaintiffs.

Civil Action No. 1:13-cv-00009-RGA

**INTERDIGITAL COMMUNICATIONS,
INC., *et al.*,**

Plaintiffs and
Counterclaim
Defendants;

v.

NOKIA CORP., *et al.*

Defendants and
Counterclaim
Plaintiffs.

Civil Action No. 1:13-cv-00010-RGA

MEMORANDUM OPINION

Neal C. Belgam, Esq., Smith, Katzenstein & Jenkins, Wilmington, DE; Maximilian A. Grant, Esq. (argued), Latham & Watkins LLP, Washington D.C.; Ron E. Schulman, Esq., Latham & Watkins LLP, Menlo Park, CA; Julie M. Holloway, Esq. (argued), Latham & Watkins LLP, San Francisco, CA; Thomas W. Yeh, Esq., Latham & Watkins LLP, Washington D.C.; attorneys for the Plaintiff.

Kelly E. Farnan, Esq., Richards, Layton & Finger, Wilmington, DE; Charles M. McMahon, Esq. (argued), Brinks, Gilson, & Lione, Chicago, IL; Jay Reiziss, Esq., Brinks, Gilson, & Lione, Washington D.C.; Hersh H. Mehta, Esq., Brinks, Gilson, & Lione, Chicago, IL; Mircea A. Tipescu, Esq., Brinks, Gilson, & Lione, Chicago, IL, attorneys for the Defendant Nokia.

Rodger D. Smith, II, Esq., Morris, Nichols, Arsht & Tunnell LLP, Wilmington, DE; Jack B. Blumenfeld, Esq., Morris, Nichols, Arsht & Tunnell LLP, Wilmington, DE; Patrick J. Flinn, Esq., (argued), Alston & Bird LLP, Atlanta, GA; John D. Haynes, Esq. (argued), Alston & Bird LLP, Atlanta, GA; David S. Frist, Esq., Alston & Bird LLP, Atlanta, GA, attorneys for the Defendant ZTE.

April , 2014


ANDREWS, UNITED STATES DISTRICT JUDGE:

Pending before this Court is the issue of claim construction of various disputed terms found in U.S. Patent Nos. 7,190,966 (“‘966 Patent”), 7,286,847 (“‘847 Patent”), 7,941,151 (“‘151 Patent”), and 8,380,244 (“‘244 Patent”).

BACKGROUND

On January 2, 2013, InterDigital Communications Inc., InterDigital Technology Corporation, IPR Licensing, Inc., and InterDigital Holdings, Inc. (“Plaintiffs”) filed four patent infringement actions. (1:13-cv-00008 D.I. 1; 1:13-cv-00009 D.I. 1; 1:13-cv-00010 D.I. 1; 1:13-cv-00011 D.I. 1)¹. The remaining defendants are ZTE Corporation, ZTE (USA) Inc., Samsung Electronics Co. Ltd., Samsung Electronics America Inc., Samsung Telecommunications America LLC, Nokia Corporation, and Nokia Inc.² (“Defendants”) The Court has considered the Parties’ Amended Joint Claim Construction Brief. (D.I. 140). The Court held oral argument on March 12, 2014. (D.I. 225).

LEGAL STANDARD

“It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal quotation marks omitted). “[T]here is no magic formula or catechism for conducting claim construction.’ Instead, the court is free to attach the appropriate weight to appropriate sources ‘in light of the statutes and policies that inform patent law.’”

¹ Unless otherwise noted, all subsequent citations to the Docket will be for case 1:13-cv-00009.

² Samsung Electronics Co. Ltd., Samsung Electronics America Inc., and Samsung Telecommunications America LLC were not parties to the present motion.

SoftView LLC v. Apple Inc., 2013 WL 4758195, at *1 (D. Del. Sept. 4, 2013) (quoting *Phillips*, 415 F.3d at 1324). When construing patent claims, a matter of law, a court considers the literal language of the claim, the patent specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977-80 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). Of these sources, “the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Phillips*, 415 F.3d at 1315 (internal quotations and citations omitted).

Furthermore, “the words of a claim are generally given their ordinary and customary meaning . . . [which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1312-13 (internal citations and quotation marks omitted). “[T]he ordinary meaning of a claim term is its meaning to [an] ordinary artisan after reading the entire patent.” *Id.* at 1321 (internal quotation marks omitted). “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314 (internal citations omitted).

A court may consider extrinsic evidence, which “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises,” in order to assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art and how the invention works. *Id.* at 1317-19 (internal quotation

marks and citations omitted). However, extrinsic evidence is less reliable and less useful in claim construction than the patent and its prosecution history. *Id.*

“A claim construction is persuasive, not because it follows a certain rule, but because it defines terms in the context of the whole patent.” *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that “a claim interpretation that would exclude the inventor’s device is rarely the correct interpretation.” *Osram GmbH v. Int’l Trade Comm’n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (internal quotation marks and citation omitted).

’966 AND ’847 PATENTS

The Court will first take up the claim construction issues that relate to the ’966 and the ’847 Patents. Claim 1 of the ’966 Patent is representative and reads:

A wireless code division multiple access (CDMA) subscriber unit comprising:

a transmitter configured such that, when the subscriber unit is first accessing a CDMA network and wants to establish communications with a base station associated with the network over a communication channel to be indicated by the base station, the transmitter *successively transmits signals* until the subscriber unit receives from the base station an indication that a transmitted one of the signals has been detected by the base station, wherein each transmission of one of the signals by the transmitter is at an increased power level with respect to a prior transmission of one of the signals;

the transmitter further configured such that the transmitter transmits to the base station a message indicating to the base station that the subscriber unit wants to establish the communications with the base station over the communication channel to be indicated by the base station, the message being transmitted only subsequent to the subscriber unit receiving the indication,

wherein each of the *successively transmitted signals* and the message are *generated using a same code*; and

wherein each of the *successively transmitted signals* is shorter than the message.

(emphasis added).

The Court construed the three relevant terms for this patent during the Markman Hearing.

(D.I. 225 at 61, 62). The Court's constructions are as follows.

A. "code"

Court's Construction: "sequence of chips or bits"

B. "generated using [a same / a portion of a / a remainder of the] code"

Court's Construction: "produced from [a same / a portion of a / a remainder of the] code"

C. "successively transmits signals; successively transmitted signals"

Court's Construction: "successively [transmits / transmitted] sequences of chips or bits"

`151 PATENT

Claim 1 of the `151 Patent is representative and reads:

A method for utilizing *channel assignment information* for an uplink shared channel or a downlink shared channel, the method comprising:

a wireless transmit/receive unit (WTRU) receiving downlink control information including downlink or uplink *channel assignment information* via a *same physical downlink control channel*, both downlink *channel assignment information* and uplink *channel assignment information* being received via the *same physical downlink control channel*;

the WTRU determining whether the downlink control information is intended for the WTRU based on WTRU identity (ID)-masked cyclic redundancy check (CRC) parity bits, and if so determining whether the *channel assignment information* is for assigning *radio resources* for the uplink shared channel or the downlink shared channel; and

the WTRU *utilizing the radio resources for the uplink shared channel or the downlink shared channel*.

(emphasis added).

A. “*radio resources*”

1. *Plaintiffs’ construction*: “resources for uplink or downlink transmissions from or to the WTRU”
2. *Defendants’ construction*: plain and ordinary meaning or “physical resources for uplink or downlink transmissions [from or to a WTRU]”
3. *Court’s construction*: “physical resources for uplink or downlink transmissions [from or to a WTRU]”

The Defendants argue that the only dispute is whether the term “physical” should be incorporated into the claim construction. (D.I. 140 at 66). The Plaintiffs state that, “There appears to be no genuine dispute among the parties with regard to the construction of this term standing alone.” *Id.* Furthermore, at oral argument both parties agreed that a “radio resource” must be “physical.” (D.I. 225 at 75, 76). The Court agrees with the parties that a “radio resource” must be a “physical resource” and therefore adopts the Defendants’ proposed claim construction as it properly captures the “physical” requirement of the disputed term.

B. “[a/the] same physical downlink control channel”

1. *Plaintiffs’ construction*: “a radio resource used to transmit uplink and/or downlink channel assignment information”
2. *Defendants’ construction*: “[a/the] channel used for transfer of downlink control information only that occupies a same radio resource defined by a channelization code”

3. *Court's construction*: “[a/the] channel used only for transfer of downlink control information that occupies a same radio resource”

The Defendants argue that their construction is necessary as it highlights the requirement “that the channel at issue be the ‘same physical’ channel in that it occupies the same radio resource.” (D.I. 140 at 52). To support this argument, the Defendants cite to the ‘151 Patent’s prosecution history and the Patent’s specification. *Id.* at 52, 53. Furthermore, the Defendants argue that the construction should require that the channel be “defined by a channelization code.” *Id.* at 53. The Defendants argue that the ‘191 Patent’s specification requires this construction because it ties the “present invention . . . to the WCDMA standard” *Id.*

The Plaintiffs argue that it is not necessary to construe this claim to require a “physical” component, as this is encompassed within the construction of the term “radio resource.” Further, the Plaintiffs argue that it is inappropriate to limit the claim to “channelization code[s]” as the ‘151 Patent states that “[t]he present invention is applicable to any type of wireless communication system such as . . . CDMA in general or any other type of wireless communication system.” *Id.* at 55 (quoting the ‘151 Patent at 3:4-9) (emphasis omitted, ellipsis in original).

The Court agrees with the Plaintiffs that including the phrase “channelization code” adds a limitation to the claim that is found in neither the claim nor the specification. Thus, its inclusion in the claim construction would be inappropriate. However, the Court does find that the Plaintiffs’ proposed construction broadens the scope of the claim to include uplink channel assignment information, which is absent from the claim language. Therefore, the Court finds

that the proper construction of the disputed phrase is the Defendants' construction, without the reference to channelization codes.

C. *"utilizing the radio resources for the uplink shared channel or the downlink shared channel"*

1. *Plaintiffs' construction:*

As used in claim 1: "using the assigned radio resources for the uplink or downlink shared channel"

As used in claim 16: "the controller is configured to use the assigned radio resources for the uplink or downlink shared channel"

2. *Defendants' construction:* "either transmitting data on the uplink shared channel or receiving data on the downlink shared channel depending on whether the assigned radio resources are for the uplink shared channel or downlink shared channel"

3. *Court's construction:*

As used in claim 1: "either transmitting data on the uplink shared channel or receiving data on the downlink shared channel"

As used in claim 16: invalid as indefinite

The Court will first address the construction of the phrase as found in claim 1 of the '151 Patent. The Plaintiffs argue that their proposed construction of the claim terms are consistent with the plain meaning. (D.I. 140 at 57). However, the Plaintiffs agreed during the Markman Hearing that the Defendants' proposed construction would be unobjectionable if the portion after, and including the word, "depending" was not adopted. (D.I. 225 at 103). Therefore, the

only remaining dispute for the Court is whether the phrase should be construed to contain the “depending” clause.

The Defendants argue that the “depending” clause is necessary as it properly reflects the order in which the action must be accomplished. (D.I. 140 at 58). In support of this argument, the Defendants cite to both the Patent’s abstract and to Fig. 3. (D.I. 140 at 58). The ‘151 Patent’s abstract states, “The WTRU takes an appropriate action based on whether the message is for assigning radio resources to the UL channel or the DL channel.” The Plaintiffs argue that there is no timing requirement in the claims, and it would be inappropriate to read such a limitation into them. The Court agrees. There is no requirement in the claim that data may not be received until after a channel assignment has been made. Furthermore, it would be inappropriate to read such a requirement into the claim, as there was no clear disclaimer of this claim scope. Therefore the Court construes the phrase, in the context of claim 1 of the ‘151 Patent, to be “either transmitting data on the uplink shared channel or receiving data on the downlink shared channel.”

Turning to claim 16 of the ‘151 Patent, the Defendants argue that the claim is indefinite “because a person of ordinary skill in the art at the time of the purported invention would not have understood whether claim 16, an apparatus claim, requires utilizing the radio resources (a method step) or having a controller configured to utilize the radio resources (a device capability).” (D.I. 140 at 58). The Plaintiffs argue that a person of ordinary skill in the art would understand that the term “utilizing” meant “to utilize” in the context of the claim. *Id.* at 60. The Plaintiffs further argue that “[u]tilizing’ in claim 16 is essentially a typographical error which the Court may correct.” *Id.*

A claim is “not sufficiently precise” under section 112 when the claim is drafted as both an apparatus and a method claim. *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005). Furthermore, a Court “may not redraft claims, whether to make them operable or to sustain their validity.” *Rembrandt Data Technologies, LP v. AOL, LLC*, 641 F.3d 1331, 1339 (Fed. Cir. 2011). The Federal Circuit has held that a district court may only correct a claim if “(1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the claims.” *Rembrandt Data Technologies*, 641 F.3d at 1339. While the Federal Circuit has found it appropriate to correct a missing comma in a claimed chemical formula, because the party had proven that without the comma the formula did not represent any known mineral, *Ultimax Cement Mfg. Corp. v. CTS Cement Mfg. Corp.*, 587 F.3d 1339, 1353 (Fed. Cir. 2009), the Federal Circuit has also indicated that correcting an apparatus claim that includes an improper method step is not permissible. *Rembrandt Data Technologies*, 641 F.3d at 1339. Here, the Plaintiffs ask the Court to rewrite a method step in an apparatus claim to preserve its validity. The Court finds that this correction is subject to reasonable debate and therefore will not redraft the claim. Therefore, claim 16 of the '151 Patent is indefinite.

D. “channel assignment information”

1. *Plaintiffs' construction*: “information regarding radio resource assignment for the uplink or downlink channel”
2. *Defendants' construction*: This term should be given its plain and ordinary meaning, but, to the extent a construction is necessary, Defendants propose “information identifying a channel assigned to the WTRU”

3. *Court's construction*: “information identifying a channel assigned to the WTRU”

The Plaintiffs argue that their proposed construction is consistent with the claim language and the specification. (D.I. 140 at 61). The Plaintiffs cite to a portion of the specification that states, “[T]he present invention is related to a method and system for providing channel assignment information to support uplink and downlink transmissions.” *Id.* The Plaintiffs argue that this passage “signals that this disclosure applies to the invention as a whole, and not merely to an embodiment.” *Id.* The Defendants respond that during the prosecution of the parent patent of the ‘151 Patent, “the applicants argued that [the prior art reference] did not disclose channel assignment information because [the prior art reference] disclosed dedicated channels, which have static channel assignments. The applicants explained that the claims required shared data channels, which are ‘dynamically adjusted.’” *Id.* at 62. Furthermore, the Defendants argue that the Plaintiffs’ proposal improperly expands the scope of the claim as it allows for any information to be transmitted, not only information that identifies the assigned channel.

The Court agrees with the Defendants. The Plaintiffs’ proposed construction improperly expands the scope of the patent. Furthermore, the Defendants’ proposed construction is consistent with the plain reading of the claim and the prosecution history of the ‘151 Patent. Therefore, the Court will adopt the Defendants’ proposed construction.

‘244 PATENT

Claim 1 of the ‘244 Patent is representative and reads:

A subscriber unit comprising:

a cellular transceiver configured to communicate with a cellular wireless network via a plurality of *assigned physical channels*;

an IEEE 802.11 transceiver *configured to communicate with an IEEE 802.11 wireless local area network*; and

a processor configured to *maintain a communication session with the cellular wireless network in an absence of the plurality of assigned physical channels* while the IEEE 802.11 transceiver communicates packet data with the IEEE 802.11 wireless local area network.

(emphasis added).

A. “*configured to communicate with an IEEE 802.11 wireless local area network*”

1. *Plaintiffs’ construction*: This phrase does not require construction, but if construed it should be construed to mean “[operable/arranged to] transmit data to and/or receive data from an IEEE 802.11 wireless local area network.”
2. *Defendants’ construction*: “set up to always connect directly to an IEEE 802.11 wireless local area network when such a connection is possible”
3. *Court’s construction*: “set up to always connect automatically to an IEEE 802.11 wireless local area network when such a connection is possible”

The Plaintiffs argue that their proposed construction comports with the plain reading of the claims. (D.I. 140 at 74). The Plaintiffs also cite to Hargrave’s Communications Dictionary to support their proposed construction. *Id.* The Defendants argue that the intrinsic record requires that the communication with the IEEE 802.11 wireless local area network happen directly. *Id.* at 75. As support for that construction, the Defendants cite the Summary of the Invention, which indicates that the invention solves the problem of manual selection. *Id.* The Defendants stated at the Markman Hearing that their proposed construction would have the same meaning if the term “directly” was substituted with the word “automatically.” (D.I. 225 at 161).

The Court finds that the inventor's description of the '244 Patent, as solving the problem of manual selection, limits the scope of the patent. Further, the Court finds that the term "directly" may lead to further confusion, as the term may confusingly imply the proximity, in time or space, of the events. Instead, the Court finds that term "automatically" appropriately captures the claim scope by emphasizing only that the action does not require manual selection. Therefore, the Court adopts the Defendants' proposed construction, with the substitution of the word "automatically" for "directly."

B. *"maintain a communication session with the cellular wireless network in an absence of the plurality of assigned physical channels"*

1. *Plaintiffs' construction*: "maintain a logical connection with the cellular wireless network when none of the [two or more physical layer channels allocable by the subscriber unit as needed to transfer data] are in use by the subscriber unit"
2. *Defendants' construction*: "spoof the subscriber unit to make it appear that a cellular wireless communication link continuously available in an absence of the plurality of assigned physical channels"
3. *Court's construction*: "maintain a logical connection with the cellular wireless network when none of the plurality of assigned physical channels are in use by the subscriber unit"

The Plaintiffs argue that the claim language "suggests that the 'communication session' is a 'logical connection' as opposed to a physical connection because, under the plain claim language, the communication session is maintained even when the physical channels have been released (or unassigned)." (D.I. 140 at 78 (footnote omitted)). The Plaintiffs maintain that their

proposed construction is further supported by the specification and the prosecution history. *Id.* at 78, 79. The Defendants argue that the issue is whether any logical connection can satisfy the claim phrase, or just spoofing. *Id.* at 79. The Defendants point the court to the prosecution history of the patent as evidence that spoofing is a required limitation. *Id.*

The '244 Patent prosecution history shows that initially the examiner rejected the relevant claim on the basis that the phrase “maintain a communication session . . . in the absence of the plurality of the assigned physical layer channels” was not supported by the specification. (D.I. 129-5 at 8). The inventor responded to this rejection by pointing the examiner to portions of the patent specification that discuss logical connections. *Id.* at 31. Specifically, the inventor stated, “[T]he communication session may be maintained via the logical connection (for example, a higher layer protocol) even as one or more physical wireless channels are released.” *Id.* In support of this argument the inventor pointed to portions of the application that discuss the use of spoofing. *Id.* The examiner responded to this argument in the Final Office Action by stating:

The examiner notes that Applicants have defined “a processor configured to maintain a communication session, with the first wireless network in the absence of the plurality of assigned physical layer channels while communicating packet data with the IEEE 802.11 wireless local area network via the second transceiver.” For example, Applicants generally point to paragraphs 0023 and 0078 (see paper dated 1/28/2011 at page 9[),] which basically indicates some sort of spoofing (i.e. spoof the terminal into believing that a sufficient wide wireless communication link is continuously available).

(D.I. 148-1 at 5).

The Court finds that the prosecution history does not support the Defendants’ argument to add a limitation to the construction of the claim. The examiner’s statement provides only a possible example for the definition of the disputed phrase. This is not sufficient to put the

inventor on notice that the invention had been limited to only spoofing, nor is it specific enough to restrict the claim. Therefore, the Court adopts the broader claim construction provided by the Plaintiffs as it reflects the proper scope of the disputed claim term.

C. “*assigned physical channels*,” “*release*,” “*allocate*,” and “*deallocate*”

The parties’ arguments regarding “assigned physical channels,” “release,” “allocate,” and “deallocate” are similar and therefore will be addressed together.

1. *Plaintiffs’ constructions:*

Assigned physical channels: “physical layer channels allocable by the subscriber unit as needed to transfer data”

Release: “stop the subscriber unit from using”

Allocate: “assign”

Deallocate: “stop the subscriber unit from using”

2. *Defendants’ constructions:*

Assigned physical channels: “physical channels available for the subscriber unit to select for use”

Release: “make no longer assigned”

Allocate: “select for use”

Deallocate: “select to stop using”

3. *Court’s constructions:*

Assigned physical channels: “physical channels available for the subscriber unit to select for use”

Release: “make no longer assigned”

Allocate: “select for use”

Deallocate: “select to stop using”

The dispute about these claim terms largely is based upon whether the ‘244 Patent uses “allocate” and “assign” interchangeably, and “deallocate” and “release” interchangeably. The Plaintiffs argue that the patent does use the terms interchangeably, and cites as evidence various points in the patent’s specification and claims. (D.I. 140 at 83). The Defendants argue that the specification teaches that “a bandwidth management function that *makes channels available for use* [assigns channels], and that a subset of those available channels are *selected for use* [allocated] to send data.” *Id.* at 84 (emphasis and brackets in original).

“In the absence of any evidence to the contrary, . . . the use of . . . different terms in the claims connotes different meanings.” *CAE Screenplates Inc. v. Heinrich Fiedler GmbH & Co. KG*, 224 F.3d 1308, 1317 (Fed. Cir. 2000). Here, the ‘244 Patent uses the terms at issue to connote different meanings. For example, the ‘244 Patent’s specification states, “[T]he network layer need not *allocate* the *assigned* wireless bandwidth for the entirety of the communications session.” ‘244 Patent, col 10: 36-38 (emphasis added). Furthermore, claims 5 and 15 both depend on claim 1 and yet each adds a similar limitation, one based on the word “release” and the other on the word “deallocate.”

The Plaintiffs argue that this case is similar to *AIA Eng’g Ltd. v. Magotteaux Int’l S/A*. (D.I. 140 at 89, 90). In *AIA Eng’g Ltd. v. Magotteaux Int’l S/A* the Federal Circuit found that while the terms being construed in the case were not the same, they could be construed to have the same definition. 657 F.3d 1264, 1276 (Fed. Cir. 2011). However, in *AIA Eng’g Ltd. v. Magotteaux Int’l S/A* the Court determined that the claims were the same because “the intrinsic

evidence reveal[ed] that the patentee acted as his own lexicographer and used ‘homogeneous solid solution’ as a synonym for ‘homogeneous ceramic composite.’” *Id.* at 1276. Conversely, here the claim terms were not defined within the specification to have synonymous definitions, and do not appear to be used interchangeably. Therefore the Court finds that the Defendants’ constructions accurately capture the proper scope of the various claim terms.

CONCLUSION

Within five days the parties should submit a proposed order consistent with this opinion and suitable for submission to the jury. The parties are additionally ordered to confer with each other regarding which terms remain in dispute in light of this Opinion. The parties should then submit a joint letter to the Court outlining the disputed terms. This letter should be submitted within ten days.

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

INTERDIGITAL COMMUNICATIONS,
INC., a Delaware corporation,
INTERDIGITAL TECHNOLOGY
CORPORATION, a Delaware corporation,
IPR LICENSING, INC., a Delaware
corporation, and INTERDIGITAL
HOLDINGS, INC., a Delaware corporation,

Plaintiffs and Counterclaim
Defendants,

v.

ZTE CORPORATION, a Chinese corporation,
and ZTE (USA) INC., a New Jersey
corporation,

Defendants and
Counterclaim Plaintiffs.

Civil Action No.: 1:13-cv-00009-RGA

JURY TRIAL DEMANDED

INTERDIGITAL COMMUNICATIONS,
INC., a Delaware corporation,
INTERDIGITAL TECHNOLOGY
CORPORATION, a Delaware corporation,
IPR LICENSING, INC., a Delaware
corporation, and INTERDIGITAL
HOLDINGS, INC., a Delaware corporation,

Plaintiffs and Counterclaim
Defendants,

v.

NOKIA CORPORATION, and NOKIA, INC.,

Defendants and
Counterclaim Plaintiffs.

Civil Action No.: 1:13-cv-00010-RGA

JURY TRIAL DEMANDED

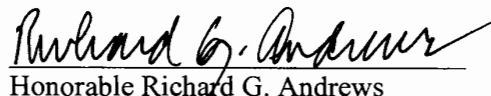
~~[PROPOSED]~~ CLAIM CONSTRUCTION ORDER

As set forth in its Memorandum Opinion on April 22, 2014 (D.I. 253), the Court has determined that, as used in the asserted claims of U.S. Patent No. 7,190,966 (“’966 Patent”), 7,286,847 (“’847 Patent”), 7,941,151 (“’151 Patent”), and 8,380,244 (“’244 Patent”), the following terms have the following meanings:

Claim Term	Construction
’966 Patent	
“code” ’966 Patent: claim 1	“sequence of chips or bits”
“generated using a same code” ’966 Patent: claim 1	“produced from a same code”
“successively transmits signals; successively transmitted signals” ’966 Patent: claims 1, 8	“successively [transmits / transmitted] sequences of chips or bits”
’847 Patent	
“code” ’847 Patent: claims 3, 5	“sequence of chips or bits”
“generated using [a same / a portion of a / a remainder of the] code” ’847 Patent: claims 3, 5	“produced from [a same / a portion of a / a remainder of the] code”
“successively transmits signals; successively transmitted signals” ’847 Patent: claims 3, 5	“successively [transmits / transmitted] sequences of chips or bits”
’151 Patent	
“radio resources” ’151 Patent: claim 1	“physical resources for uplink or downlink transmissions [from or to a WTRU]”
“[a/the] same physical downlink control channel” ’151 Patent: claim 1	“[a/the] channel used only for transfer of downlink control information that occupies a same radio resource”
“utilizing the radio resources for the uplink shared channel or the downlink shared channel” ’151 Patent: claim 1	“either transmitting data on the uplink shared channel or receiving data on the downlink shared channel”

Claim Term	Construction
“channel assignment information” ’151 Patent: claims 1, 8, 9	“information identifying a channel assigned to the WTRU”
’244 Patent	
“configured to communicate with an IEEE 802.11 wireless local area network” ’244 Patent: claim 1	“set up to always connect automatically to an IEEE 802.11 wireless local area network when such a connection is possible”
“maintain a communication session with the cellular wireless network in an absence of the plurality of assigned physical channels” ’244 Patent: claim 1	“maintain a logical connection with the cellular wireless network when none of the plurality of [physical channels available for the subscriber unit to select for use] are in use by the subscriber unit”
“assigned physical channels,” ’244 Patent: claims 1, 5, 7, 15, 21	“physical channels available for the subscriber unit to select for use”
“release,” ’244 Patent: claims 5, 21	“make no longer assigned”
“allocate” ’244 Patent: claim 15	“select for use”
“deallocate” ’244 Patent: claim 15	“select to stop using”

IT IS SO ORDERED this 29th day of April, 2014.



Honorable Richard G. Andrews
UNITED STATES DISTRICT COURT JUDGE

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

INTERDIGITAL COMMUNICATIONS, INC.,
a Delaware corporation, INTERDIGITAL
TECHNOLOGY CORPORATION, a Delaware
corporation, IPR LICENSING, INC., a
Delaware corporation, and INTERDIGITAL
HOLDINGS, INC., a Delaware corporation,

Plaintiffs

v.

ZTE CORPORATION, a Chinese corporation,
and ZTE (USA) INC., a New Jersey
corporation,

Defendants.

C.A. No. 13-009-RGA

MEMORANDUM OPINION

Neal C. Belgam, Esq., Clarissa R. Chenoweth, Esq., Smith Katzenstein & Jenkins LLP, Wilmington, DE; Ron E. Shulman, Esq., Latham & Watkins LLP, Menlo Park, CA; Maximilian A. Grant, Esq., Bert C. Reiser, Esq., Jonathan D. Link, Esq., Latham & Watkins LLP, Washington, D.C.; Julie M. Holloway, Esq., Latham & Watkins LLP, San Francisco, CA; David S. Steuer, Esq., Michael B. Levin, Esq., Maura L. Rees, Esq., Wilson Sonsini Goodrich & Rosati, Palo Alto, CA, attorneys for Plaintiffs InterDigital Communications, Inc., InterDigital Technology Corporation, IPR Licensing, Inc., and InterDigital Holdings, Inc.

Kelly E. Farnan, Esq., Travis S. Hunter, Esq., Richards, Layton & Finger, P.A., Wilmington, DE; Ralph J. Gabric, Esq., Charles M. McMahon, Esq., Mircea A. Tipescu, Esq., Brian A. Jones, Esq., Hersh H. Mehta, Esq., Brinks Gilson & Lione, Chicago, IL; Jay H. Reiziss, Esq., Brinks Gilson & Lione, Washington, D.C., attorneys for Defendants ZTE Corporation and ZTE (USA) Inc.

March 18, 2016


ANDREWS, U.S. DISTRICT JUDGE:

Currently before the Court is Defendants ZTE Corporation and ZTE (USA) Inc.'s (collectively, "ZTE") renewed motion for judgment as a matter of law, or, in the alternative, for a new trial. (D.I. 465). The matter has been fully briefed. (D.I. 466, 471, 480).

For the reasons set forth herein, ZTE's renewed motion for judgment as a matter of law, or, in the alternative, for a new trial (D.I. 465) is **DENIED** with respect to the '966 and '847 patents. Decision on the motion is **POSTPONED** with respect to the '244 patent.

BACKGROUND

On January 2, 2013, InterDigital Communications, Inc., InterDigital Technology Corporation, IPR Licensing, Inc., and InterDigital Holdings, Inc. (collectively, "InterDigital") filed this patent infringement action. (D.I. 1). The Court held a six-day jury trial on October 20, 2014 through October 27, 2014. InterDigital alleged that ZTE infringed U.S. Patent Nos. 7,190,966 ("the '966 patent"), 7,286,847 ("the '847 patent"), 8,380,244 ("the '244 patent"), and 7,941,151 ("the '151 patent"). The Court declared a mistrial as to the '151 patent on October 22, 2014. (D.I. 444 at 680). The jury found all asserted claims of the remaining patents valid and infringed. (D.I. 450).

After a second jury trial, the Court entered a judgment based on the jury verdict against Plaintiffs on the '151 patent. (D.I. 543)

Meanwhile, the PTAB invalidated all claims of the '244 patent. (D.I. 570, citing D.I. 557). Plaintiffs have appealed that determination to the Federal Circuit, where it is now pending. IPR Licensing, Inc. v. ZTE Corp., No. 16-1374. Appellant's principal brief is due April 29, 2016.

LEGAL STANDARD

A. Judgment as a Matter of Law

Judgment as a matter of law is appropriate if “the court finds that a reasonable jury would not have a legally sufficient evidentiary basis to find for [a] party” on an issue. FED. R. CIV. P. 50(a)(1). “Entry of judgment as a matter of law is a ‘sparingly’ invoked remedy, ‘granted only if, viewing the evidence in the light most favorable to the nonmovant and giving it the advantage of every fair and reasonable inference, there is insufficient evidence from which a jury reasonably could find liability.’” *Marra v. Phila. Hous. Auth.*, 497 F.3d 286, 300 (3d Cir. 2007) (citation omitted).

“To prevail on a renewed motion for JMOL following a jury trial, a party must show that the jury’s findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied [by] the jury’s verdict cannot in law be supported by those findings.” *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1348 (Fed. Cir. 1998) (alterations in original). “‘Substantial’ evidence is such relevant evidence from the record taken as a whole as might be accepted by a reasonable mind as adequate to support the finding under review.” *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893 (Fed. Cir. 1984).

In assessing the sufficiency of the evidence, the Court must give the non-moving party, “as [the] verdict winner, the benefit of all logical inferences that could be drawn from the evidence presented, resolve all conflicts in the evidence in his favor and, in general, view the record in the light most favorable to him.” *Williamson v. Consol. Rail Corp.*, 926 F.2d 1344, 1348 (3d Cir. 1991). The Court may “not determine the credibility of the witnesses [nor] substitute its choice for that of the jury between conflicting elements in the evidence.” *Perkin-Elmer Corp.*, 732 F.2d at 893. Rather, the Court must determine whether the evidence supports

the jury's verdict. *See Dawn Equip. Co. v. Ky. Farms Inc.*, 140 F.3d 1009, 1014 (Fed. Cir. 1998); *Gomez v. Allegheny Health Servs. Inc.*, 71 F.3d 1079, 1083 (3d Cir. 1995) (describing standard as "whether there is evidence upon which a reasonable jury could properly have found its verdict"); 9B CHARLES ALAN WRIGHT & ARTHUR R. MILLER, FEDERAL PRACTICE AND PROCEDURE § 2524 (3d ed. 2008) ("The question is not whether there is literally no evidence supporting the party against whom the motion is directed but whether there is evidence upon which the jury might reasonably find a verdict for that party.").

Where the moving party bears the burden of proof, the Third Circuit applies a different standard. This standard "requires the judge to test the body of evidence not for its insufficiency to support a finding, but rather for its overwhelming effect." *Fireman's Fund Ins. Co. v. Videofreeze Corp.*, 540 F.2d 1171, 1177 (3d Cir. 1976) (quoting *Mihalchak v. Am. Dredging Co.*, 266 F.2d 875, 877 (3d Cir. 1959)). The Court "must be able to say not only that there is sufficient evidence to support the finding, even though other evidence could support as well a contrary finding, but additionally that there is insufficient evidence for permitting any different finding." *Fireman's Fund Ins. Co.*, 540 F.2d at 1171 (quoting *Mihalchak*, 266 F.2d at 877).

B. Motion for a New Trial

Federal Rule of Civil Procedure 59(a)(1)(A) provides, in pertinent part: "The court may, on motion, grant a new trial on all or some of the issues—and to any party— . . . after a jury trial, for any reason for which a new trial has heretofore been granted in an action at law in federal court" Among the most common reasons for granting a new trial are: (1) the jury's verdict is against the clear weight of the evidence, and a new trial must be granted to prevent a miscarriage of justice; (2) newly discovered evidence exists that would likely alter the outcome of the trial; (3) improper conduct by an attorney or the court unfairly influenced the verdict; or

(4) the jury's verdict was facially inconsistent. *See Zarow-Smith v. New Jersey Transit Rail Operations, Inc.*, 953 F.Supp. 581, 584-85 (D.N.J. 1997).

The decision to grant or deny a new trial is committed to the sound discretion of the district court. *See Allied Chem. Corp. v. Daihatsu, Inc.*, 449 U.S. 33, 36 (1980); *Olefins Trading, Inc. v. Han Yang Chem. Corp.*, 9 F.3d 282, 289 (3d Cir.1993) (reviewing district court's grant or denial of new trial motion under the "abuse of discretion" standard). Although the standard for granting a new trial is less rigorous than the standard for granting judgment as a matter of law—in that the Court need not view the evidence in the light most favorable to the verdict winner—a new trial should only be granted where "a miscarriage of justice would result if the verdict were to stand," the verdict "cries out to be overturned," or where the verdict "shocks [the] conscience." *Williamson*, 926 F.2d at 1352–53.

PATENTS-IN-SUIT

The '966 and '847 "same code" patents are entitled "method and apparatus for performing an access procedure." These patents claim a device and procedure for establishing a communication session between a cellphone and a cellular network. (D.I. 443 at p. 120). At a very general level, the technology involves a cellphone sending out short signals (also referred to as "preambles") at increasing power until it receives an indication from a base station. (*Id.* at pp. 124-25). Once the phone receives the indication, it transmits a message requesting a channel over which to establish a connection. (*Id.* at p. 125). The successively transmitted signals are generated using the "same code" as the message. (*Id.*). As discussed below, the central dispute with respect to these patents is whether the preambles and messages transmitted by the accused devices are generated using a "same code."

The '244 "logical connection" patent is entitled "dual mode unit for short range, high rate and long range, lower rate data communications." The patent claims a device (the "subscriber unit") configured to connect to a Wi-Fi network when one is available, and to otherwise communicate over a cellular network, as well as a method for using the device. The subscriber unit establishes a connection with a cellular network using what are referred to as "physical channels." (D.I. 443 at p. 143). If a Wi-Fi connection becomes available, the subscriber unit switches over to the wireless network. (*Id.* at p. 142). When switching over, the subscriber unit drops the physical channels it had used to communicate over the cellular network. (*Id.* at p. 147). It continues to maintain a "logical connection" to the network, which makes it easier to switch back to the cellular network if the Wi-Fi network becomes unavailable. (*Id.* at pp. 146-147).

There are two limitations at issue here. First, the "available for use" limitation requires that the physical channels over which the subscriber unit communicates with the base station on the cellular network be available for use even when the subscriber unit is communicating over Wi-Fi. (D.I. 466 at p. 7). Second, as noted above, the patent requires that the subscriber unit maintain a "logical connection" with a cellular network that the phone had used to communicate before switching to Wi-Fi. (D.I. 443 at p. 146).

ANALYSIS

A. JMOL of Non-Infringement

1. The '966 and '847 "Same Code" Patents

ZTE argues that it is entitled to judgment as a matter of law on the "same code" patents because InterDigital did not introduce substantial evidence to show that ZTE's phones generate both the successively transmitted signals and the message using the same code. (D.I. 466 at p.

3). ZTE maintains that Dr. Jackson, InterDigital's infringement expert, admitted on cross-examination that the preamble scrambling code and the message scrambling code are different codes. (*Id.*). ZTE cites the following testimony as his admission: "The standard gives you the 4,096 [chips for the preamble] and the 38,400 [chips for the message], but I'm not aware of any device that adds them together to the 42,000." (*Id.*). ZTE further argues that Dr. Haas, InterDigital's invalidity expert, testified that retrospectively combining different sections of code generated from a theoretical long sequence is not a "same code." (*Id.* at pp. 3-4).

InterDigital responds that Dr. Jackson's testimony was substantial evidence to support a finding that ZTE's phones meet the "same code" requirement. (D.I. 471 at pp. 3-4). Dr. Jackson testified that the preambles are always generated using the first 4,096 chips of $C_{\text{long},1,n}$ and the messages are always generated using the next 38,400 chips of that same code. (*Id.* at p. 3). Even if one believes that Dr. Jackson's "admission" on cross-examination contradicts that testimony, InterDigital argues that the jury is entitled to credit whatever portions of a witness's testimony it chooses. (*Id.* at p. 4).

InterDigital also argues that Dr. Jackson's testimony does not contradict Dr. Haas's testimony. (*Id.*). Dr. Haas testified that the prior art IS-95 generated and combined random snippets of a forty-two-day long theoretical sequence. (*Id.*). Dr. Haas explained that retrospectively combining random snippets did not generate a "same code." (*Id.*). InterDigital argues that his testimony does not contradict Dr. Jackson's. (*Id.*). Dr. Haas discussed a combination of random sections of a code, not consecutive segments of one code. (*Id.*). Unlike in the prior art, the accused devices always use the first 42,496 chips of $C_{\text{long},1,n}$. (*Id.*).

I agree that Dr. Jackson's testimony is substantial evidence from which the jury could find that ZTE's phones meet the "same code" requirement. Dr. Haas and Dr. Jackson testified about

different codes that operate differently, and it is not inconsistent to say that one code meets the “same code” requirement and the other does not. Dr. Jackson testified that the “same code” in the ZTE phones was generated as follows: “the scrambling code generator generates 4,096 chips, basically the hardware hits a pause button and it starts it up again and it runs it again for another 38,400.” (D.I. 444 at 472). The jury is entitled to rely on that and related testimony to find that the ZTE phones meet the “same code” limitation. I do not think it is inconsistent to say that retroactively combining random snippets of a theoretical code, which combinations would be different each time, is not a “same code.” The jury is presumed to have considered all of the evidence, assessed the credibility of the competing experts, and given the evidence whatever weight the jury felt appropriate. The jury had substantial evidence that it found credible, and I will not disrupt its findings.

ZTE also argues that there is not substantial evidence that its phones satisfy the “synchronize to a/the pilot signal” limitations of the ’847 patent. (D.I. 466 at p. 5). ZTE maintains that Dr. Jackson provided only conclusory testimony about those limitations, which does not constitute substantial evidence to support the jury’s findings. (*Id.* at p. 6).

InterDigital responds that ZTE did not dispute Dr. Jackson’s opinion that the phones meet the “pilot signal” limitations. (D.I. 471 at p. 7). It notes that the Federal Circuit has held, “The responsibility for challenging the factual underpinnings of the testimony fell squarely on [the defendant] during cross-examination.” (*Id.* (quoting *Symbol Technologies, Inc. v. Opticon, Inc.*, 935 F.2d 1569, 1575 (Fed. Cir. 1991))).

I agree with Interdigital. ZTE, of course, does not have the burden of proving non-infringement, but it seems to me that ZTE should have challenged Dr. Jackson’s testimony if ZTE believed it lacked support. Dr. Jackson explained his analysis and testified that, based on

that analysis, he found that the accused devices met the “pilot signal” limitations. (*See* D.I. 471 at pp. 6-7). I think his unchallenged testimony constitutes substantial evidence to support the jury’s findings.

2. The ’244 “Logical Connection” Patent

In view of the doubt as to validity of this patent, I believe it makes sense to postpone resolution of the JMOL until the Federal Circuit rules. Thus, rather than ruling on this now, I am going to postpone resolution of this portion of the motion.

B. New Trial

1. The ’966 and ’847 “Same Code” Patents

ZTE argues that the jury’s validity and infringement verdicts are inconsistent for the reasons discussed above with respect to the “same code.” (D.I. 466 at p. 13). ZTE maintains that Dr. Jackson testified that retrospectively combining two different sections of a code is a “same code,” but Dr. Haas testified that it is not. (*Id.* at pp. 13-14). ZTE contends that if its phones use a “same code,” then so do prior art phones. (*Id.* at p. 1). Therefore, if the patents are infringed, they cannot be valid.

InterDigital responds that the verdicts are not inconsistent for the same reasons judgment as a matter of law is not appropriate. (D.I. 471 at p. 11). That is to say, the “same code” in the accused devices is a continuation of a single code (*i.e.*, the first 4,096 chips of $C_{\text{long},l,n}$ for the preamble and the next 38,400 chips for the message). (*Id.* at p. 4). The prior art codes, on the other hand, are retroactively combined random snippets of a theoretical sequence. (*Id.*). InterDigital maintains that the accused devices never use a collection of random snippets as the “same code,” so validity and infringement are not inconsistent. (*Id.*).

I agree with InterDigital. For the reasons discussed above, the jury had substantial evidence from which to find that the ZTE phones met the “same code” requirement and the prior art phones did not. The infringement and invalidity verdicts are therefore not inconsistent.

2. Use of Licensing Evidence

ZTE argues that a new trial is warranted due to InterDigital’s use of prejudicial licensing evidence. (D.I. 466 at p. 18). Before trial, I ruled that InterDigital could refer to evidence of its licensing activities as context testimony. (C.A. 13-10 D.I. 339 at 2-3). ZTE argues that InterDigital exceeded the scope of that ruling and repeatedly argued to the jury that a majority of the industry had licensed InterDigital’s patents. (D.I. 466 at p. 18). ZTE contends that such evidence caused the jurors to infer that the patents were valid and infringed. (*Id.*).

InterDigital argues that its references to licensing activities were within the scope of my motion *in limine* ruling. (D.I. 471 at p. 17). It maintains that the testimony and argument did not specify whether there were any licenses to the patents-in-suit or which companies took licenses. (*Id.* at p. 18). InterDigital also contends that ZTE’s objections are untimely. (*Id.* at p. 17).

I do not agree that the objection is untimely, as ZTE preserved it by objecting to the testimony in its motion *in limine*. Nevertheless, I do not think that ZTE has shown that it is “reasonably probable that the verdict was influenced by prejudicial statements.” *Union Carbide Chemicals & Plastics Tech. Corp. v. Shell Oil Co.*, 308 F.3d 1167, 1182 (Fed. Cir. 2002) (applying Third Circuit law). While I think InterDigital probably exceeded the scope of my ruling, I do not think the licensing references were sufficiently prejudicial to warrant a new trial.

3. Closing Arguments

ZTE argues that a new trial is warranted by InterDigital's improper attack on the credibility of ZTE's witnesses. (D.I. 466 at p. 19). ZTE argues that InterDigital used a misleading impeachment "scoreboard" in closing argument. (*Id.*). ZTE maintains that many of the alleged impeachments identified on the scoreboard were actually consistent statements. (*Id.*). ZTE argues that, because InterDigital emphasized the scoreboard as a measure of credibility, it is reasonably probable that it improperly influenced the jury's verdict. (*Id.* at 20).

InterDigital argues that ZTE's objection is untimely. (D.I. 471 at pp. 18-19). In addition, InterDigital argues that even if the impeachment argument in closing was improper, any prejudice was cured by the jury instructions. (*Id.* at p. 19). InterDigital notes that I instructed the jury that it was the sole judge of credibility. (*Id.*).

ZTE's objection is not untimely, as it objected to the impeachment scoreboard prior to closing argument. (D.I. 448 at p. 1681). I do not, however, think that it warrants a new trial. The jury was instructed that it was the sole judge of credibility and that arguments made by attorneys were not evidence. (D.I. 535). The jury was entitled to determine for itself whether the alleged impeachments showed inconsistent testimony. I do not think it is reasonably probable that InterDigital's demonstrative improperly influenced the jury's verdict.

CONCLUSION

For the reasons set forth above, ZTE's renewed motion for judgment as a matter of law, or, in the alternative, for a new trial (D.I. 465) is **DENIED** with respect to the '966 and '847 patents. Decision on the motion is postponed with respect to the '244 patent until decision by the Federal Circuit. An appropriate order will be entered.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

INTERDIGITAL COMMUNICATIONS, INC.,
a Delaware corporation, INTERDIGITAL
TECHNOLOGY CORPORATION, a Delaware
corporation, IPR LICENSING, INC., a
Delaware corporation, and INTERDIGITAL
HOLDINGS, INC., a Delaware corporation,

Plaintiffs

v.

ZTE CORPORATION, a Chinese corporation, and
ZTE (USA) INC., a New Jersey corporation,

Defendants.

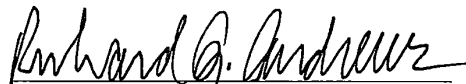
C.A. No. 13-009-RGA

ORDER

Having reviewed the relevant papers, for the reasons stated in the accompanying
Memorandum Opinion, **IT IS HEREBY ORDERED:**

ZTE's renewed motion for judgment as a matter of law, or, in the alternative, for a new
trial (D.I. 465) is **DENIED** with respect to the '966 and '847 patents. Decision on the motion
with respect to the '244 patent is postponed until the Federal Circuit decides the appeal in case
no. 16-1374. The undecided portion of the motion is **ADMINISTRATIVELY CLOSED**.

Entered this 18 day of March, 2016.


United States District Judge

CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Federal Circuit by using the appellate CM/ECF system. I certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

Dated: November 29, 2016

/s/ Charles M. McMahon

CERTIFICATE OF COMPLIANCE

Pursuant to Rule 32(a)(7)(C) of the Federal Rules of Appellate Procedure, I certify that the foregoing brief, prepared using proportionally-spaced 14-point Book Antiqua font, consists of 12,815 words as counted by Microsoft® Word, which was used to generate this brief.

Dated: November 17, 2016

/s/ Charles M. McMahon